

THE COST OF CURRENT DEFENSE PLANS: AN ANALYSIS OF BUDGET ISSUES

HEARING BEFORE THE COMMITTEE ON THE BUDGET HOUSE OF REPRESENTATIVES ONE HUNDRED ELEVENTH CONGRESS FIRST SESSION

HEARING HELD IN WASHINGTON, DC, OCTOBER 14, 2009

Serial No. 111-16

Printed for the use of the Committee on the Budget



Available on the Internet:
<http://www.gpoaccess.gov/congress/house/budget/index.html>

U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 2010

53-004 PDF

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CONTENTS

Hearing held in Washington, DC, October 14, 2009	Page 1
Statement of:	
Hon. John M. Spratt, Jr., Chairman, House Committee on the Budget	1
Hon. Paul Ryan, ranking minority member, House Committee on the Budget	2
Hon. Robert B. Aderholt, a Representative in Congress from the State of Alabama, questions for the record	60
Matthew Goldberg, Acting Assistant Director for National Security, Congressional Budget Office	3
Prepared statement of	9
Responses to Congressman Aderholt's questions for the record	60
Stephen Daggett, specialist in defense policy and budgets, Congressional Research Service	27
Prepared statement of	33
Responses to Congressman Aderholt's questions for the record	62

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WEDNESDAY, OCTOBER 14, 2009

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE BUDGET,
Washington, DC.

The Committee met, pursuant to call, at 10:11 a.m., in room 210, Cannon House Office Building, Hon. John M. Spratt, Jr. [Chairman of the Committee] presiding.

Present: Representatives Spratt, Doggett, Etheridge, Yarmuth, Edwards, Scott, Schrader, Ryan, Jordan, Aderholt, Lummis, and Harper.

Chairman SPRATT. This is your typical weekday session. You know we have multiple conflicts with the meeting today. I am sure we will have some members joining us later on, and those like our distinguished Ranking Member who just arrived. Do you have anywhere to go later on? Ways and Means?

Mr. RYAN. Not for a while. Yeah, I have Ways and Means at noon.

Chairman SPRATT. Well let us get under way. We got two good witnesses, and we welcome you and everyone else to the hearing today on the Cost of Current Defense Plans.

Our witnesses this morning are excellent witnesses. They have made a career literally of studying expense spending. Steve Daggett, Specialist in Defense Policy and Budgets with the CRS, Congressional Research Service, and Matthew Goldberg who is the Acting Director of National Security Division of the Congressional Budget Office.

Our purpose today is to get an update of current defense plans and to gain better insight into the issues that are driving defense spending over the longer term.

Our Nation is faced with some enormous fiscal challenges. The worst recession since the great depression the record budget deficit and defense budgets at record levels as well. To take on these challenges and to ensure that we are spending the taxpayer's money wisely, we need to consider the whole domain of federal policy making, including defense, which after all makes up more than half of all federal discretionary spending.

Next week we will hold a hearing, a second hearing on the topic of longer term challenges of the defense budget. Our witnesses will be Deputy Secretary of Defense William Lynn, and Defense Comptroller Robert Hale, that will be next week.

Since 2001 the federal government has more than doubled what the Nation spends on defense. Defense spending now stands at its

highest level since World War II, in real terms surpassing the peak spending years of Korea and Vietnam. Splitting war costs out, defense spending over this period grew well above rate of inflation, increasing seven to eight percent a year. Future costs are projected to follow the same rising path, and if these plans remain unchanged we will have a significant increase in defense over the next five years.

The Congressional Budget Office has issued a number of reports showing that the Bush Administration's defense plan would require tens of billions of dollars more per year than its own budget projected. This last budget request the Bush Administration projected defense spending to slow down and flatten out this year, but it did not project scenarios or engagements or troop levels consistent with such a decline in the real defense spending and it is not likely to happen.

The Obama Administration submitted its 2010 budget this May with a number of changes to the defense budget. The Obama Administration has proposed to cancel or to slow down a number of acquisition programs which are experiencing problems and calls for acquisition reform to control cost growth. This marks a move in the right direction, but much more needs to be done. Great challenges lie ahead.

For example, O&M, operation and maintenance and military personnel. These make up two-thirds of the Defense Department's budget, and they are growing at a rate far above the rate of inflation, threatening to squeeze out our ability to fund R&D and new acquisitions. And of course we cannot ignore or overlook the cost of overseas deployment. Even though we are beginning to draw down forces in Iraq, we are also beginning to add to forces in Afghanistan, which diminishes the prospect of any peace dividend and implies that the cost of our overseas deployments will continue to be significant.

The Administration is now conducting the QDR, the Quadrennial Defense Review. This will assess programs and consider costs and roles and missions and ultimately defense strategy recommendations that will form the basis of the 2011 budget. In preparation of the release of the QDR recommendations and the 2011 budget we hope to get a better understanding of how the long-term projections of the Nation's defense plan have changed since the 2010 budget and a clearer understanding of the issues that lie at the heart of ongoing defense spending.

Before we turn to your witnesses let me turn to the Ranking Member, Mr. Ryan of Wisconsin, and ask for any opening statement that he would like to make. Mr. Ryan.

Mr. RYAN. Thank you, Chairman Spratt, I also want to welcome our witnesses. Steven Daggett, welcome back, good to have you. Matthew Goldberg welcome. We appreciate you being here.

I think it is fair to assume that the chief concern on most American's minds these days and the minds of Congress remains the economy, jobs, and the future of our health care sector. But even as we continue to address these challenges others are coming to a head. Among them of course is how we are going to handle Afghanistan and Iraq, as well as other developing threats like Iran and North Korea.

So even with the countless competing commands in the budget, this Congress must continue to honor the primary role of the federal government providing for our national defense.

In short that means ensuring America's men and women in uniform have whatever resources are necessary to complete their missions. We simply cannot take our national defense for granted.

Now that being said, I did not mean to imply that there is not a great deal of room for improvement on DoD's budgetary front, there sure is. There is clearly an opportunity for savings, particularly in the procurement programs. So I look forward to exploring how the Department might more efficiently meet its critical mission. But I also want to discuss how this Congress might avoid the growing temptation to raid DoD's budget for more domestic spending as resources get tighter. That is my current budgetary concern when it comes to discretionary spending. We saw this in the 1990s, I fear we may be returning to a time where we are raiding defense not necessarily for efficiency gains, but just for the sake of raiding defense in order to plus up more domestic spending, building in a higher spending baseline, and creating more deficits. I hope we can resist that temptation while we do get the kinds of savings we need from defense for deficit reduction.

I am eager to hear from both members and witnesses on their thoughts on how we can achieve savings in the DoD budget without eroding its ability to provide for our Nation's security. Thank you, chairman.

Chairman SPRATT. Thank you, Mr. Ryan. Before proceeding with the testimony of our witnesses just a few housekeeping details. I would ask unanimous consent that all members be allowed to submit an opening statement for the record at this point. And as to our witnesses I would say we have your complete statements, there are just two witnesses today, you should feel free to take as much time as necessary to explain your testimony, but we will make the full testimony part of the record so that you can summarize where you see fit.

Dr. Goldberg, I understand you wish to go first?

Mr. GOLDBERG. Yes, sir.

Chairman SPRATT. Then the floor is yours, and we welcome you once again to the hearing, and we appreciate your participation and the efforts you put in producing the statement that you made part of the record today.

**STATEMENTS OF MATTHEW GOLDBERG, ACTING ASSISTANT
DIRECTOR FOR NATIONAL SECURITY, CONGRESSIONAL
BUDGET OFFICE; STEPHEN DAGGETT, SPECIALIST IN DE-
FENSE POLICY AND BUDGETS, CONGRESSIONAL RESEARCH
SERVICE**

STATEMENT OF MATTHEW GOLDBERG

Mr. GOLDBERG. Thank you, Mr. Chairman, and Congressman Ryan and other members of the Committee. It is my pleasure to be here today representing the Congressional Budget Office to talk about the long-term implications of the 2010 budget submission for the Department of Defense.

As you probably recall, Mr. Chairman, over the past seven years what CBO has done is looked at the DoD's plans as presented in their budget and in their FYDP, their Future Years Defense Program, which generally takes the budget out and projects another five or six years. This year, the first year in the new Administration the budget came over, but without a FYDP, so we are working at a bit of a disadvantage this year, and especially in light of the changes that Secretary Gates announced for acquisition programs, and we don't have full information on how those programs will play out. Indeed I don't think those decisions have been made, so we are truly presenting today projections that are somewhat preliminary based on the information we have, which is the 2010 budget, the announcements made by the Secretary and senior defense officials since the budget rollout.

Our projections start in 2011 and go out through 2028. The amount that the Administration requested in regular defense funding, and that is putting aside for the moment overseas contingency operations, that is 534 billion for 2010. Our projection is that in constant 2010 dollars carrying out those plans would require a larger amount. It would require 567 billion. In other words, some 30 billion more than was currently planned. We estimate we would be required to carry out those plans in the future to continue buying the systems and the programs of record, to continue the levels of personnel, the end-strength plans, et cetera, that are reflected in the 2010 budget.

The reason that we are projecting higher resource demands in the future than in 2010, I will talk about those today, there are four main categories to start.

One is that military pay raises have generally been higher than the employment cost, index which is a measure of parity in the civilian sector. And in fact there is permanent law that passed in 2003 that would have the military pay raises equal to the change, percentage change in the ECI. And many years Congress has chosen to grant higher pay raises of half a percentage point above the ECI, so that compounds over the years, and so military pay is growing, growing in real terms, growing faster than inflation.

There have also been increases in the O&M accounts as you mentioned in your opening remarks, Mr. Chairman. O&M is growing. Interestingly we see O&M growing for the older systems as they get older and harder to maintain, and we also see the newer and more complex systems requiring more O&M as well.

Turning to the acquisition area, DoD has plans to field new advanced weapon systems. In some cases to replace other systems, existing systems that are reaching the end of their service life, and also to switch toward newer capabilities such as advance intelligence, surveillance, and reconnaissance, so-called ISR assets.

This year we had the Administration's request for the overseas contingency operations as \$130 billion, that is on top of the 534—they requested in the regular budget, and that reflects a shift of—early this year we were estimating that in March there were 175 service members in the Iraq theater and 40,000 in the Afghanistan theater. The Administration's request of 130 billion would support 100,000, a smaller number in Iraq, but a larger number, 68,000 troops on the ground in Afghanistan.

In our projections we have a category of what we call those contingency unbudgeted costs. In other words they are costs to continue overseas contingency operations, they are separately identified in 2010 as the 130 billion. The Administration has a placeholder for 50 billion per year in the next five years, what it would cost to continue those operations. We have our own estimates that are somewhat higher than that, and that is what we call contingency unbudgeted costs.

And then we have other types of unbudgeted costs. Other things that can happen as they have in the past that could cause the need for defense resources to be higher than what is in the budget. For example, weapon systems often end up costing more than preliminary estimates. We have cost growth in weapon systems. DoD's medical costs often grow faster than what has been in the budget. And for those and other factors we are projecting that the total demands on average through 2028 could be as high as 624 billion per year, including overseas operations, including these various kinds of cost growths, again in weapon systems and in health care and in other places.

In terms of the share of gross domestic product we are projecting that defense spending would nonetheless decrease below four percent of GDP, because we are expecting GDP growth to pick up again, and that has been discussed elsewhere in the CBO testimony.

What are the factors that are driving these increases? Well again, military pay. There are several aspects of military compensation. One is that the military pay raises have been more generous than the increase in the ECI, the Employment Cost Index, for civilian workers, and in many of the most recent years, in particular in 2004, '05, and '06, and then again more recently, and in our projections we have military pay growing at the same rate as ECI, but nonetheless ECI grows faster than the price index. So even if the Congress would enact pay increases just equal to the ECI without the extra half percent that is sometimes been granted, you will still have real increases in the cost of the military personnel.

Similarly civilian personnel often end up getting the same pay raise as military personnel. It is called the pay parity principal. That has been true in 20 or the past 28 years. So in our projections again, we have military personnel receiving real pay increases, we have federal civilians, including civilians working for DoD receiving pay increases, most of them are paid out of the O&M appropriation, so that is another reason that the O&M appropriation is projected to grow. And of course we have other military benefits that have been enacted over the past decade that are built into our projections. Establishment of TRICARE for life, the changes to the REDUX retirement system that restored retirement at 50 percent of basis pay, rules regarding concurrent receipt so that military retirees can receive their military retirement pay as well as their veterans compensation with fewer offsets, and they recently passed changes to the age at which retirees can start drawing their pay; below age 60.

So all of these changes that have been made in the past ten years and are built into our projections as well as real pay increases, that is pay increases at the ECI, they exceed inflation.

Now part of the discussion about the military pay raises has to do with the so-called pay gap, and the pay gap is computed by going back to 1982, which was a year when after two big pay raises when it was widely thought that military pay was brought into parity, into equity with civilian pay, and then the issue is whether the military pay raises have kept up since '82 with the ECI, that is the civilian pay raises. And using this pay gap, this comparison to the ECI as a benchmark, has been a justification for many of the recent pay raises, and in fact there are folks who still claim that the pay gap is 2.9 percent. That is that military pay has not quite caught up. It is about three percent behind where it should have been based on 1982.

We put out a paper earlier this year where we argued that a better measure of military pay is not basic pay, but what we call RMC, Regular Military Compensation, which includes the food and housing allowances, and also accounts for the fact that those allowances are not subject to federal tax. And if you use the RMC to make the comparison rather than basic pay our analysis reveals that in fact there is not a pay gap, that there is a pay surplus. That since 2002 pay has caught up and then some since it would have been based on the benchmark started in 1982.

So those considerations apply to the military pay raise, they also apply to the civilian pay raise, to the degree that civilians are granted the same pay raise as military with the same justification compared to the ECI and compared to the pay gap.

Nonetheless in our estimates in our high case and we call unbudgeted pay increases, which is the high dash lines in your Figure 1, we do have military and civilian pay raises above the ECI, the employment cost index, by half a percentage point for each of the next five years, 2011 through 2015. And to fund those pay raises would cost about 2.8 billion in military personnel account and 2.3 billion in the O&M account by 2015, and those raises would continue to compound so that by 2028 it would cost 3.6 billion in the military personnel appropriation, and 2.8 in the O&M appropriation, according to our estimates.

I would like to use my remaining time of my opening statement to talk a little bit about the procurement and the RDT&E, the Research and Development Accounts. We are actually projecting less in those accounts than we were last year at this time based on the 2009 FYDP. Again, we don't have a FYDP this year, we just have the 2010 budget, we don't have the out years that ordinarily come with the FYDP; however, based on that and other information that we do have, if you go out to a common year comparing our projections now to projections that were briefed here a year ago based on a 2009 FYDP, we are projecting that procurement funding by 2020 would be \$8 billion lower than where we thought it would have been in 2020 as of the information a year ago, and that total investment will be called procurement plus RTD&E would be 7 billion lower. So there is some impact that we see immediately from some of the changes that Secretary Gates announced that are built

into the 2010 defense budget. And I would like to talk a little bit about three or four of those if I could.

The active Army had started off with 42 brigade combat teams, and the plan in the 2009 FYDP was to grow that number from 42 to 48. We observed earlier this year that it would probably take additional endstrength to fill out an Army with 48 brigade combat teams. It would probably take about 23,000 additional soldiers, and that would cost about 16 billion over the next five years. In fact what the Secretary announced in April is that rather than going all the way up to 48 brigade combat teams he would stop at 45. So roughly speaking the 16 billion for those last three brigades, numbers 46, 47, and 48 is avoided—is contained by stopping at 45 brigade combat teams, and that is reflected in our projection.

Probably the biggest single change in regards to the FCS program, the Future Combat System, where the ground vehicles portion was suspended by Secretary Gates, we had been projecting based on the 2009 FYDP, that as a year ago that for the next ten years, starting from that point, that is fiscal years 10 through 19, the FCS program would have cost about 60 billion, that the spin out of technology, communications, and other technology to all of the infantry brigades in the Army would cost another 10 billion, and upgrades to combat vehicles that we thought would have been necessary, keep them modern, would have cost another 28 billion. The total of the ten-year cost of those three aspects would have been 98 billion. Ten years worth of FCS and related programs.

In light of what Secretary Gates announced we are projecting a smaller number, 80 billion, 18 billion less over ten years. And I should say that this is a very preliminary estimate in that I don't believe the Department has decided, and they certainly haven't announced, exactly where they are going with replacement to the vehicles program in the FCS, but in our estimates if you were to upgrade existing Abrams Tanks, Bradley Fighting Vehicles, M109 self-propelled howitzers and by continuing to buy Stryker vehicles that would cost you about 43 billion between 2010 and 2019, and that the spin out of communication and other equipment would cost another 37 billion. So in total those related programs would cost about 80 billion. Given our current understanding of where the Department is going that may change. And that is again compared to the 98 billion, the estimate a year ago at this time.

I want to talk finally about ballistic missile defense. As you know, Mr. Chairman, there were several important announcements made in April. The Secretary announced plans to freeze the number of ground-based interceptors in Alaska, but to continue research and development on defense against long-range ballistic missiles. The Secretary also asked for 200 million to start converting Aegis warships, six of them, to perform ballistic missile defense. And then on top of announcement the President in September announced that he was canceling for now the previous Administration's plan to field tracking radar in the Czech Republic in ten ground-based interceptors and silos in Poland, and that plan was replaced by a four-phase plan. The first phase of that would rely on the Block 1A of the standard missile, the SM-3 missile deployed on existing Aegis warships, and then there were three more phases that would introduce land-based element, as well as up-

grades to the standard missiles, some of which are still under development.

The thing I want to point out here, and again, this is very much a program that is in flux and we don't know where it is going, and nobody has announced where it is going, a big driver in cost here is going to be the types of ships in the ship-based option. And there are basically three ways I think you could go.

One is to take existing Aegis warships and upgrade them to do the ballistic missile defense mission. One thing I should point out is if you want three ships permanently on station around the war of Europe you need to dedicate nine ships in total. Because for each ship that is on station you have another ship that is roughly speaking in training, the next one to go out, and another ship that is in maintenance and overhaul. So three stations require about nine ships. The Secretary asked for 200 million to upgrade six ships, and that would ultimately be in CBO's estimation nine ships to do the mission. That is the lowest cost way to do the mission is to take existing ships and convert them. The problem then is that you will have nine ships dedicated to this mission that can't do something else. That is the trade off. Or you could build new ships, nine new ships that are dedicated to this mission. And then the question is what kind of ships do you want? To build Arleigh Burkes configured for this mission, nine of them would cost about 19 billion in total.

There is another option that we have looked at which is to take a ship that looks more like the Littoral combat ship, the LCS, which is a less expensive ship, add a spy one radar and vertical launch cells to the LCS and that would cost about 6 billion in total for the nine ships. So 6 billion for the converted LCS versus about 19 billion for the Aegis destroyers to perform the same mission.

All told in the missile defense area we are projecting that costs will be quite a bit lower than we were seeing a year ago. In 2010 alone the Secretary of Defense asked for 1.4 billion less than the prior year, and we are estimating on an average through 2028 that with all the changes that were announced the total bill for missile defense could average about 2 billion less per year than what we were looking at based on the 2009 budget and FYDP.

And with that I would like to close my statement and I of course welcome your questions, Mr. Chairman.

[The statement of Matthew Goldberg follows:]



Congressional Budget Office

Testimony

Statement of
Matthew S. Goldberg
Acting Assistant Director

Long-Term Implications of the Department of Defense's Fiscal Year 2010 Budget Submission

before the
Committee on the Budget
U.S. House of Representatives

October 14, 2009

*This document is embargoed until it is delivered at
10:00 a.m. (EDT) on Wednesday, October 14, 2009.
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CONGRESSIONAL BUDGET OFFICE
SECOND AND D STREETS, S.W.
WASHINGTON, D.C. 20515

Mr. Chairman, Congressman Ryan, and Members of the Committee, I appreciate the opportunity to appear before you today to discuss the long-term implications of the fiscal year 2010 budget submission for the Department of Defense (DoD). Decisions about national defense made today—whether they involve numbers of personnel, military compensation, or weapon systems—can have long-lasting effects on the composition of the nation's armed forces and the budgetary resources needed to support them.

Over the past seven years, the Congressional Budget Office (CBO) has published a series of reports about its projections of the resources that could be required over the long term (typically two decades) to carry out the nation's defense plans.¹ Those projections differ from CBO's baseline, under which discretionary defense spending grows at the rate of inflation without reference to DoD's plans.²

This testimony is the latest installment in CBO's analyses of DoD's budget requests. It concerns CBO's preliminary projections for fiscal years 2011 through 2028. Those projections are based in part on the President's 2010 budget request and budget justification materials the Administration provided to the Congress with that request.³ Among the other sources CBO consulted to supplement its analysis were DoD press releases and briefing materials and the Secretary of Defense's announcement in April 2009 of changes to the nation's defense plans.⁴ For its analyses of past budget requests, CBO has drawn from information in DoD's Future Years Defense Program (FYDP), which typically is submitted to the Congress with the President's annual budget request.⁵ This year, however, the Administration did not submit a FYDP, which would have covered the years 2011 through 2015.

CBO projects that carrying out the plans proposed in the President's 2010 budget request excluding overseas contingency operations (in general, overseas military operations against hostile forces—currently consisting of the wars in Iraq and Afghanistan and military actions elsewhere to combat terrorism) would require defense resources averaging \$567 billion annually (in constant 2010 dollars) from 2011 to 2028 (see Figure 1 on page 15 and Table 1 on page 19).⁶ That amount is about 6 percent more

1. The first of those Congressional Budget Office reports, *The Long-Term Implications of Current Defense Plans*, appeared in January 2003. Each year since then, CBO has published summary and detailed updates (the latter in annotated briefing format); all are available online: www.cbo.gov.
2. Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2009 to 2019* (January 2009).
3. Department of Defense, "DoD [2010 Budget] Request," www.defenselink.mil/comptroller/Budget2010.html.
4. Department of Defense, "Defense Budget Recommendation Statement" (as prepared for delivery by Secretary of Defense Robert M. Gates, April 6, 2009), www.defenselink.mil/speeches/speech.aspx?speechid=1341.
5. The FYDP is a database that comprises a historical record of defense forces and funding as well as DoD's plans for future programs. The historical portion shows costs, forces, and personnel levels since 1962. The plan portion presents DoD's program budgets (estimates of funding needed for the next five or six years, based on the department's current plans for all of its programs).
6. CBO measures inflation by the implicit price deflator for gross domestic product. That index measures overall prices among final goods and services in the U.S. economy.

than the \$534 billion in total obligational authority (TOA) requested by the Administration in its regular 2010 budget, again excluding overseas contingency operations.⁷ Four main factors account for the higher resources required in the long term:

- The likelihood of continued real growth in pay and benefits for DoD's military and civilian personnel;
- The projected increases in the costs of operation and maintenance (O&M) for aging equipment as well as for newer, more complex equipment;
- DoD's plans to develop and field advanced weapon systems to replace many of today's military systems that are nearing the end of their service lives; and
- Investments in new capabilities, such as advanced intelligence, surveillance, and reconnaissance systems, to meet emerging security threats.

Supplemental and emergency appropriations to fund overseas contingency operations totaled \$171 billion in 2007 (\$180 billion in constant 2010 dollars), or 39 percent as much as regular funding for DoD that year. In 2008, those appropriations peaked at \$187 billion (\$192 billion in constant 2010 dollars), again 39 percent as large as the regular defense budget that year. In 2009, those appropriations dropped to \$154 billion (\$155 billion in constant 2010 dollars), or 35 percent the size of the regular defense budget, reflecting a reduction in the number of U.S. military personnel in Iraq.

This year, for the first time since overseas contingency operations began in fiscal year 2002, the Administration has requested a full year of anticipated appropriations for those operations along with its regular defense budget request. In March 2009, the U.S. military had deployed about 175,000 service members to the Iraq theater and about 40,000 to the Afghanistan theater. The Administration's request of \$130 billion for 2010 would support a smaller total number: 100,000 service members in Iraq and 68,000 in Afghanistan.⁸ CBO does not have access to DoD's estimates of costs for overseas contingency operations in 2011 or later that would have been contained in the 2010 FYDP.⁹

7. All funding in CBO's projection is calculated as TOA, the bulk of which is for annual appropriations sought by the department. Budget authority differs from TOA in that it includes the effects of certain receipts, permanent spending in certain trust funds and other accounts, and certain payments to the military retirement fund. In recent years, the difference between TOA and budget authority in subfunction 051 of the federal budget (which funds the Department of Defense) has been \$2 billion or less.

8. Department of Defense, *Fiscal Year 2010 Budget Request: Summary Justification* (May 2009), www.defenselink.mil/comptroller/defbudget/fy2010/fy2010_SSJ.pdf.

9. The Administration submitted a "placeholder estimate," however, in the President's 2010 budget request of \$50 billion per year from 2011 to 2014. See Office of Management and Budget, *Updated Summary Tables: Budget of the U.S. Government, Fiscal Year 2010* (May 2009), Table S-12, www.whitehouse.gov/omb/budget/fy2010/assets/summary.pdf.

The long-term demand for defense resources could be larger than CBO's base projections. CBO has developed a scenario under which, consistent with the Status of Forces Agreement signed by the governments of Iraq and the United States in November 2008, all U.S. troops would be withdrawn from Iraq by December 31, 2011. The total number of U.S. military personnel deployed worldwide would decline to 30,000 starting in fiscal year 2013, although those troops would be in unspecified locations and not necessarily in Iraq or Afghanistan.¹⁰ CBO estimates that supporting that number of deployed service members would require recurring annual appropriations of about \$20 billion in 2010 dollars. CBO refers to those costs as "contingency unbudgeted costs."

Other factors also could increase defense resources above CBO's base projections. There could be higher costs for developing and purchasing new weapon systems; CBO's analysis of unbudgeted costs assumes the same percentage cost growth, on average, that has been observed in the past.¹¹ In addition, as has been true historically, medical costs could rise more rapidly than DoD has assumed; CBO assumes that DoD's medical costs per capita beyond fiscal year 2015 will increase 30 percent faster than the rate projected for the rest of the nation.¹² Accounting for those and other factors, as well as contingency costs, CBO has projected the "total unbudgeted costs" of current defense plans. The inclusion of total unbudgeted costs increases the projection to an annual average of \$624 billion through 2028, or 17 percent more than the regular funding requested for 2010 (see Figure 1). Some 38 percent of the total unbudgeted costs between 2013 and 2028 are associated with overseas contingency operations.

Under DoD's current plans and CBO's projections, defense resources would steadily decline as a share of U.S. gross domestic product (GDP).¹³ That share declined from

10. Congressional Budget Office, *The Budget and Economic Outlook: An Update* (August 2009), pp. 21–26.

11. See Mark V. Arena and others, *Historical Cost Growth of Completed Weapon System Programs*, TR-343-AF (prepared by RAND Corporation for the United States Air Force, 2006), www.rand.org/pubs/technical_reports/2006/RAND_TR343.pdf; and Obaid Younossi and others, *Is Weapon System Cost Growth Increasing? A Quantitative Assessment of Completed and Ongoing Programs*, MG-588-AF (prepared by RAND Corporation for the United States Air Force, 2007), www.rand.org/pubs/monographs/2007/RAND_MG588.pdf.

12. DoD anticipates that medical costs will escalate more rapidly than general inflation. In its programming guidance for fiscal year 2010, the DoD comptroller promulgated annual inflation rates for fiscal years 2013 through 2015 of 1.8 percent for operation and maintenance, excluding fuel and the Defense Health Program (DHP), 7 percent for private-sector medical care purchased by the DHP, 10.1 percent for pharmacy outlays, and 6.4 percent for other DHP outlays (mostly for care provided at military treatment facilities). See Department of Defense, "Inflation Guidance—Fiscal Year (FY) 2010 President's Budget" (memorandum from the Under Secretary of [Comptroller], February 13, 2009), www.ncca.navy.mil/services/PB2010_Inflation_Guidance_Feb_13_2009.pdf. For the justification of the 30 percent acceleration in costs beyond 2015, see Congressional Budget Office, *Growth in Medical Spending by the Department of Defense* (September 2005), p. 14.

13. CBO's estimate of future GDP growth is based on continuing the series presented in *The Budget and Economic Outlook: An Update*.

an annual average of 5.6 percent in the 1980s to 3.8 percent in the 1990s and rose again above 4 percent after 2005 with supplemental and emergency funding included.¹⁴ If DoD's current plans were carried out, defense spending would decline to 3.2 percent of GDP by 2015 and to 2.6 percent of GDP by 2028. Defense spending would be higher when unbudgeted costs are included, but it would still decline to 3.8 percent of GDP by 2015 and to 3.1 percent of GDP by 2028 (see Figure 2 on page 16).

The remainder of this testimony describes in more detail CBO's projections of funding for operation and support (O&S) accounts and for investment accounts. O&S accounts include the appropriation titles for military personnel, O&M, and various revolving funds.¹⁵ I highlight causes of increases in those accounts over the past decade, some of which CBO projects will continue to grow for the next decade or two. Investment accounts are for developing, testing, and purchasing weapon systems and other equipment. I discuss possible budgetary effects of recent announcements by the Secretary of Defense concerning the restructuring or termination of several major defense acquisition programs.

Projections of Funding for Operation and Support

The 2010 regular budget request (excluding overseas contingency operations) includes \$188 billion, or 35 percent of the total, for O&M and \$136 billion, or 25 percent of the total budget, for military personnel (see Table 1).

Between 1980 and 2001, O&M costs per active-duty service member increased steadily by about \$2,200 per year (in constant 2010 dollars). O&M has deviated above that trend since 2002 because the wars in Iraq and Afghanistan have required large amounts of O&M funding but more modest increases in active end strength (the number of active military personnel as of the last day of the fiscal year.)¹⁶ Those funds supported U.S. military forces in the Iraq and Afghanistan theaters, providing food, housing, and contracted security; fuel, spare parts, and maintenance for military equipment; transportation of personnel and equipment to and from the theater; and other services. The regular defense budget for 2010 requests O&M funding that exceeds the prewar trend line by between \$12,000 and \$15,000 per service member; an additional \$9,000 per service member would be required if funding for overseas contingency operations is included.

14. Defense spending here is measured by the actual disbursements (outlays) from the Treasury that arise from funding for defense programs.

15. For its analysis, CBO treats the revolving funds as part of the O&M appropriation. The revolving funds generate receipts from fees charged to the military services and defense agencies; they also receive direct appropriations. Those funds include the National Defense Sealift Fund, the Defense Commissary Agency, Defense Coalition Support, and each military department's fund for working capital.

16. The Army's active-duty end strength increased by 13 percent, from 480,000 in 2001 to 544,000 in 2008. The supplemental and emergency appropriations for Army O&M in 2007 totaled twice the amount in the regular budget for that year.

Important Influences on the Costs of Operation and Support

For its projections, CBO divided O&S funding into functional categories used by DoD's program analysts:¹⁷

- *Operating forces*—military and support units assigned to combatant commands;
- *Medical*—medical personnel, military medical treatment facilities (MTFs), purchased care, pharmaceuticals, and medical accrual charges;¹⁸
- *Bases, installations, and infrastructure*—installations for military forces, communications and information infrastructure, central benefit programs for DoD personnel, and miscellaneous activities;
- *Command and intelligence*—operational headquarters, command-and-control systems, and intelligence collection;
- *Central training*—training at central locations away from service members' duty stations;
- *Central logistics*—depot-level maintenance, supplies, and transportation of materiel; and
- *Headquarters and administration*—acquisition infrastructure, science and technology programs, central personnel administration, and departmental management.

CBO assumes that all costs other than those for military and civilian pay and the two categories labeled "operating forces" and "medical" grow at the rate of general inflation (see Figure 3 on page 17 and Table 2 on page 20). Projected funding for operating forces exhibits real growth because as weapon systems age, their O&M costs increase as well. Moreover, new generations of weapon systems are likely to be more complex and more expensive to operate and maintain than the systems they replace.¹⁹ Medical costs also have grown faster than other O&M-funded activities in the past, and the DoD comptroller's programming guidance anticipates continuing inflation in those costs.²⁰

17. The definitions that follow are adapted from Ronald E. Porten, Daniel L. Cuda, and Arthur C. Yenling, *DoD Force and Infrastructure Categories: A FIDP-Based Conceptual Model of Department of Defense Programs and Resources* (Alexandria, Va.: Institute for Defense Analyses, September 2002).

18. Medical accrual charges are distributed among all of the O&S functional categories in the defense budget. To provide a comprehensive estimate of DoD's medical costs, CBO consolidated all such charges in the medical category.

19. Congressional Budget Office, *The Effects of Aging on the Costs of Operating and Maintaining Military Equipment* (August 2001).

20. See Department of Defense, "Inflation Guidance—Fiscal Year (FY) 2010 President's Budget."

CBO projects continued real growth in military and civilian pay. In November 2003, Congress passed a permanent law that indexed the annual increase in basic military pay to the percentage increase in the Bureau of Labor Statistics' employment cost index (ECI) for wages and salaries in private industry.²¹ The ECI grew more rapidly than the GDP deflator in all years but two from 1981 to 2009; CBO projects that pattern will continue between 2010 and 2028 and that growth of the ECI will exceed growth of the GDP deflator by an average of 1.4 percentage points per year. Furthermore, in 20 of the past 28 years the annual pay raise for federal civilians has been set equal to (and, in one year, above) the percentage increase in basic military pay.²² Assuming that pay raises for federal civilians continue to keep pace with those for military personnel, CBO projects continued real growth in pay for both groups.

CBO's projections reflect several developments over the past decade that provided new or enhanced military benefits:

- *Changes to the REDUX retirement system.* The immediate annuity paid to military personnel who retire after 20 years of active service increased from 40 percent to 50 percent of a service member's "high-three" basic pay, and the system now provides full (rather than partial) cost-of-living adjustments each year.²³
- *Establishment of TRICARE for Life.* Expanded health care coverage is now available for Medicare-eligible military retirees and their families, paying most of what would have been the retiree's out-of-pocket cost shares under Medicare as well as funding space-available care for retirees at MTFs.²⁴
- *Elimination of the Social Security Offset for the Survivor's Benefit Plan.* The retirement annuity for surviving spouses who participate in the plan and attain age 62 increased from 35 percent to 55 percent of the deceased service member's retirement pay.²⁵

21. Section 602 of the NDAA for fiscal year 2004 (P.L. 108-136, 117 Stat. 1498, amending 37 U.S.C. 1009). See Department of Labor, Bureau of Labor Statistics, "Employment Cost Trends: Data Usage," www.bls.gov/ncs/usage.htm; and Charles A. Henning, *Military Pay and Benefits: Key Questions and Answers*, CRS RL33446 (Congressional Research Service, updated October 31, 2008), www.policyarchive.org/bitstream/handle/10207/20192/RL33446_20081031.pdf?sequence=3.

22. In two other years, 2000 and 2001, the pay raise for civilian employees was set equal to the across-the-board increase in basic military pay, but the Congress enacted additional military pay raises tied to seniority. Thus, the average military pay raise exceeded the civilian pay raise in those two years.

23. The basic pay that determines an active-duty service member's retirement annuity is computed as the average of the 36 highest months of basic pay in the service member's career. The retirement changes were enacted in the National Defense Authorization Act for Fiscal Year 2000 (NDAA, Public Law 106-65, 113 Stat. 512) and affected service members who retired beginning in 2006.

24. TRICARE for Life was enacted in the NDAA for fiscal year 2000. The program is funded on an accrual basis, with payments into the Medicare-Eligible Retiree Health Care Fund charged against the military personnel accounts.

25. That change was enacted in the NDAA for fiscal year 2005 (P.L. 108-375, section 644, 118 Stat. 1960, 10 U.S.C. 1451).

- *Changes in the Rules Regarding Concurrent Receipt.* Several classes of retired military personnel are now permitted to receive military retirement pay without any offset for compensation for a service-connected disability they receive from the Department of Veterans Affairs.²⁶
- *Provision of Early Receipt of Retirement Pay by Some Reservists.* The age at which retired members of the reserve components can receive retirement pay was lowered to less than age 60 in some cases and is based on the accumulation of periods of active duty during the member's military career.²⁷

In addition to those new benefits, the Congress has enacted real increases in basic military pay that affect the pay of active service members and their future retirement annuities. DoD funds military retirement on an accrual basis, with payments into the Military Retirement Fund charged against the military personnel accounts. Higher basic pay today leads to higher projections of future retirement annuities, in turn requiring larger contributions today from the military personnel accounts into the retirement fund.²⁸

Military Compensation

In early 1980s, several relatively large increases in military pay were enacted that purportedly equalized the pay scales for military personnel and the civilian workforce. However, many observers assert that since 1982 a gap has developed between basic military pay and civilian wages and salaries. The Congress has passed several measures in an effort to close that gap.

Pay Comparability. Up to 2003, the annual increase in basic military pay had been linked to the percentage increase in the General Schedule pay scale under the Federal Employees Pay Comparability Act of 1990. In November 2003, the Congress enacted a permanent law requiring that annual increases in basic pay from 2007 forward be indexed to the ECI. That law also stipulated that the pay increases for 2004, 2005, and 2006 exceed the increase in the ECI by one-half of 1 percentage point.²⁹ With the 2008 and 2009 pay increases, which also exceeded the percentage increase in the ECI, the pay gap, which in 1998 and 1999 reached 13.5 percent, was reduced to

26. The rules for concurrent receipt have been relaxed successively in the Bob Stump NDAA for fiscal year 2003 (P.L. 107-314, section 636, 116 Stat. 2574, 10 U.S.C. 1413a, as amended by section 642 of the NDAA for fiscal year 2004, P.L. 108-136, 117 Stat. 1566) and in the NDAA for fiscal year 2008 (P.L. 110-181, section 641, 122 Stat. 156).

27. That change was enacted in the NDAA for fiscal year 2008 (P.L. 110-181, section 647, 122 Stat. 160, 10 U.S.C. 12731).

28. Those calculations are revisited each year by DoD's Office of the Actuary, most recently in "Valuation of the Military Retirement System: September 30, 2007" (December 2008), www.defenselink.mil/actuary/valbook2007.pdf.

29. Section 602 of the NDAA for fiscal year 2004 (P.L. 108-136, 117 Stat. 1498, amending 37 U.S.C. 1009).

2.9 percent (the percentage by which the cumulative increase in military basic pay since 1982 fell short of the cumulative increase in the ECI for wages and salaries in private industry; see Figure 4 on page 18).

The pay gap as conventionally measured might not provide the best information on the adequacy of military compensation. First, the broad sample of civilian workers included in the survey used to produce the ECI consists of people who are, on average, older than military personnel and more likely to have college degrees. Since 1980, the pay of college-educated workers has risen faster than that of high school graduates in the civilian sector. Also, the pay of older civilian workers generally has grown faster than that of younger workers.

Basic pay for enlisted personnel closely matches the 50th percentile (median) earnings for civilian counterparts of comparable age and education. With cash allowances added to the equation, pay for the average enlisted member in 2006 matched the 75th percentile of civilian earnings, exceeding DoD's stated goal of paying at the 70th percentile.³⁰

The pay gap calculation focuses on one part of military compensation—basic pay—and ignores changes in other components. Regular military compensation (RMC) is a broader measure that, in addition to basic pay, includes housing and food allowances, which are not subject to the federal income tax. In addition to raising basic pay in 2000, DoD requested and lawmakers authorized a restructuring of housing allowances that eliminated out-of-pocket expenses typically paid by service members (those payments had averaged about 20 percent of housing costs).³¹ Other changes were made as well: Allowance rates were more closely linked to increases in local housing prices, and service members were given "rate protection" from any declines in those prices.

With RMC substituted for basic pay in the comparison, annual increases in military compensation outpaced the corresponding increases in the ECI for 8 of the 10 years between 2000 and 2009. The pay gap recomputed using RMC reveals a pay surplus after 2002, standing at 10.3 percent as of January 1, 2009 (the percentage by which the cumulative increase in RMC since 1982 exceeded the cumulative increase in the ECI for wages and salaries in private industry; see Figure 4). Ultimately, the best barometer of the effectiveness of DoD's compensation system is how well the military attracts and retains high-quality, skilled personnel. Overall, in recent years DoD has met its goals in recruiting and retaining active-duty members (perhaps because

30. The percentile comparisons were reported in Congressional Budget Office, *Evaluating Military Compensation* (June 2007). DoD's goal of paying at the 70th percentile was first stated in Department of Defense, *Report of the Ninth Quadrennial Review of Military Compensation* (2002), www.defenselink.mil/prhome/qrmc/.

31. Those changes were enacted in the NDAA for fiscal year 2001 (P.L. 106-398, section 605, 114 Stat. 1654A-147, 37 U.S.C. 403).

military compensation compares favorably with civilian options), notwithstanding the prospect of deployment to Iraq or Afghanistan.³²

Many of the same considerations apply to DoD's civilian personnel. DoD's 2010 budget calls for employing 745,000 full-time-equivalent civilians who would earn \$69 billion in compensation in that year. Of that sum, \$57 billion would be paid from the O&M appropriation.³³ The same pressures that real increases (above general inflation) in military compensation exert on the military personnel appropriation are reinforced by real increases in civilian compensation in the O&M (and other) appropriations, both contributing to the real increases in funding required for operation and support.

Unbudgeted Pay Increases. CBO's base projection assumes that military and civilian pay raises from 2011 forward will be set equal to the percentage increase in the ECI.³⁴ Among other factors, CBO's analysis of unbudgeted costs attempts to quantify the impact on future defense budgets if military and civilian pay raises above the ECI continue to be enacted. In particular, CBO's analysis assumes that military personnel and federal civilians will receive pay raises in 2011 through 2015 that equal its projection of the percentage increase in the ECI plus a premium of 0.5 percentage points. Funding those five years of larger pay raises would require an additional \$2.8 billion in the military personnel appropriation and \$2.3 billion in the O&M appropriation (to fund higher civilian salaries) by 2015. Although pay raises are assumed to revert to the ECI after 2015, the funding necessary to sustain the larger pay raises assumed from 2011 through 2015 would continue to compound in future years, requiring \$3.6 billion in the military personnel appropriation and \$2.8 billion in the O&M appropriation by 2028.

32. Congressional Budget Office, *Recruiting, Retention, and Future Levels of Military Personnel* (October 2006).

33. See the "Green Book," namely, Department of Defense, *National Defense Budget Estimates for FY 2010* (June 2009), Tables 61, 62, and 75, www.defenselink.mil/comptroller/defbudget/fy2010/Green_Book_Final.pdf. (The remaining civilians would be paid from other appropriation titles: For instance, civilians in military laboratories might be paid from the appropriation for research, development, test, and evaluation; civilians in acquisition programs offices might be paid from the procurement appropriation.)

34. The pay raises that are expected to take effect on January 1, 2010, have not yet been enacted. DoD's 2010 budget requested a military raise of 2.9 percent and assumed a 2.0 percent raise for civilian employees (see Department of Defense, *Fiscal Year 2010 Budget Request: Summary Justification*). The House and Senate versions of the 2010 NDAA (H.R. 3170 and S. 1390) would provide a larger military raise of 3.4 percent. The House version of the Financial Services and General Government Appropriations Act for 2010 (H.R. 3170) would provide a raise of 2.0 percent for federal civilian employees, as requested by the Administration, whereas the Senate version (S. 1432) would provide a raise of 2.9 percent. CBO's base projection assumes raises of 2.9 percent for military personnel and 2.0 percent for civilians, as in DoD's budget request; CBO's estimate of unbudgeted costs assumes larger raises of 3.4 percent in 2010 for military personnel and civilians.

Projections of Funding for Investment

The 2010 regular budget request for investment (excluding overseas contingency operations) includes \$109 billion, or 20 percent of the total defense budget, for procurement; it also includes \$79 billion, or 15 percent of the total, for research, development, test, and evaluation (RDT&E, see Table 1). CBO's projection of \$126 billion in procurement funding for 2020 is \$8 billion below CBO's earlier projection that was based on the 2009 FYDP; CBO's projection of \$187 billion in total investment funding for 2020 is \$7 billion below its earlier projection.³⁵ The new, smaller projections incorporate recently announced changes to DoD's investment plans.

Basis of Projections

The Secretary of Defense announced several major changes to DoD's investment plans before the formal release of the 2010 budget.³⁶ Although additional details were provided in the budget request and in subsequent press releases and briefing materials, the Administration did not submit a FYDP (which would have contained projected funding and other program information through 2015) with its 2010 budget request. Nor did it submit year-end (December 2008) Selected Acquisition Reports (SARs), which would have provided cost, schedule, and funding data (including the estimated out-year funding requirements) to reflect the program of record for each major defense acquisition program.

In the absence of information typically available in a FYDP, CBO relied on the President's 2010 budget request, with its accompanying budget justification materials, and other sources (including the previous year's FYDP and SARs, to the extent they are still applicable) to project investment resources through what would have been the FYDP years (2011 through 2015) and further out, to 2028 (see Table 3 on page 21).

Important Influences on Projections of the Costs of Investment

This section provides four examples of changes in DoD's investment plans that CBO was largely able to anticipate and thus build into its projection of the 2010 defense budget. Those four changes affect the number of brigade combat teams (BCTs) in the active Army, the Future Combat Systems (FCS) program, the Airborne Laser (ABL) program, and sea- and land-based missile defense in Europe.

DoD's Plans to Lower the Target Number of BCTs in the Active Army from 48 to 45.

According to the 2009 FYDP, DoD planned to expand the active Army from 42 to 48 combat brigades by 2013 (as well as 28 BCTs in the Army National Guard). In its 2009 edition of *Budget Options*, CBO noted that the active Army would probably be unable to identify 23,000 additional soldiers (beyond those already identified) to fully populate 6 new brigades under the current cap on total Army personnel.³⁷ In April

35. See Congressional Budget Office, *Long-Term Implications of the Fiscal Year 2009 Future Years Defense Program* (January 2009).

36. Department of Defense, "Defense Budget Recommendation Statement."

37. Congressional Budget Office, *Budget Options, Volume 2* (August 2009), Option 050-1, p. 6.

2009, the Secretary of Defense proposed curtailing the number of BCTs at 45 (versus 48) as a means to ensure that deployed units are fully staffed and to end the routine use of "stop loss" (the practice of involuntarily retaining deployed soldiers past the end of their enlistment or reenlistment contracts, until after their units return to the United States). The Secretary also proposed maintaining the active Army's planned end strength at 547,000. CBO estimates that by holding that end strength, DoD can avoid requesting as much as \$16 billion over the next five years in budget authority that would be required for the expansion.³⁸

DoD's Plans to Cancel the Manned-Vehicles Portion of the Army's FCS Program. The FCS program had been planned to encompass eight new models of manned combat vehicles as well as new unmanned aerial and ground vehicles, sensors, and munitions. All of those components would be linked by advanced communications networks into an integrated combat system. In January 2009, CBO projected (on the basis of the 2009 FYDP) that the Army's FCS program would cost \$60 billion over the next 10 years; "spinning out" technology enhancements to all of the Army's infantry BCTs would cost \$10 billion; the upgrades and purchase of combat vehicles would cost \$28 billion. The combined 10-year cost of those related programs would have been \$98 billion.

The Secretary announced in April 2009 that DoD would cancel the manned-vehicle portion of the FCS program. The department would then reevaluate that component and restart it at some unspecified time in the future. Further details concerning the revised FCS program, including funding estimates and delivery schedules for the various components, will most likely not be available until DoD submits its 2011 budget (and associated FYDP) in February 2010. As a substitute for the FCS plan that would have procured about 300 new vehicles per year, CBO analyzed a plan under which the Army would upgrade its existing Abrams tanks, Bradley fighting vehicles, and M109 self-propelled howitzers and also purchase new Stryker wheeled vehicles. CBO estimates those upgrades and new purchases of an average of 770 vehicles per year would cost a total of \$43 billion between 2010 and 2019. In addition, CBO estimated a cost of \$37 billion over the same 10-year period to spin out improved communications and other systems for all 73 of the Army's active and National Guard BCTs.³⁹ All together, the program assumed in CBO's projections would cost an estimated \$18 billion less over the next 10 years than the plan in the 2009 FYDP. (The Secretary's

38. The Secretary of Defense also announced a temporary increase in active Army end strength from 547,000 to 569,000 through fiscal year 2012. The Secretary indicated that the increase in end strength for fiscal years 2009 and 2010 could be achieved without requesting any additional budget authority (see Department of Defense, "DoD News Briefing with Secretary Gates and Chairman, Joint Chiefs of Staff Adm. Michael Mullen" [news transcript, July 20, 2009], www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4447). The source for funding in 2011 and 2012 remains to be determined.

39. Congressional Budget Office, *Budget Options, Volume 2* (August 2009), Option 050-4, p. 10; *An Analysis of the Army's Transformation Programs and Possible Alternatives* (June 2009); and *The Army's Future Combat Systems Program and Alternatives* (August 2006).

announcement concerning FCS left open the possibility of restarting the Army's program to develop new types of manned combat vehicles; CBO's estimates did not include any development or procurement costs for that program.)

DoD's Plans to Cancel the Second ABL Aircraft and Restructure the Program as a Research and Development Effort. The ABL program, managed by the Missile Defense Agency, has been working to develop a system to destroy enemy ballistic missiles during their boost phase—the few minutes after launch before a missile's rocket motors burn out—by means of a high-energy chemical laser carried on modified Boeing 747 aircraft. Under previous plans, a successful test of the first ABL against a missile in flight would have been followed by development of a second prototype and, eventually, by the fielding of seven aircraft for operational use. Citing problems with technology and cost as well as doubts about the operational roles envisioned for the ABL, DoD announced that plans for the second aircraft would be shelved and that the program would be shifted to a research and development effort.

CBO is currently examining the operational effectiveness and potential costs of purchasing and operating a fleet of ABL aircraft. The analysis will explore such factors as how well the ABL's lasers and optics will perform in combat, the number of aircraft needed to keep a single ABL on station around the clock, the vulnerability of the ABL to enemy action, and the potential need for additional support such as fighter protection and aerial refueling.

CBO's projection assumed that the shoot-down test for the first ABL aircraft, which was originally scheduled for 2009, would be completed in 2010 but that none of the seven subsequent ABL aircraft would be built. CBO also assumed that the Missile Defense Agency would maintain an ongoing research and development effort costing \$300 million per year in 2010 dollars. CBO estimates that those changes to the ABL program would yield net savings in budget authority of \$2.4 billion over the next five years (2010–2014) and \$8.6 billion between 2010 and 2019 (in 2010 dollars). The Secretary's announcement left open the possibility that a second or later ABL aircraft could be procured, depending on the outcome of the shoot-down test and subsequent research and development efforts; CBO's estimate does not include any funding for those aircraft.

DoD's Plans to Change Ground-Based Missile Defense Systems. In April 2009 the Secretary of Defense announced plans to freeze the current number of ground-based interceptors in Alaska as part of the ground-based midcourse missile defense system that is intended to defend the United States against limited ballistic missile attacks from North Korea or Iran. The plan would continue funding for research and development to improve the nation's ability to defend against long-range ballistic missiles. DoD also announced plans to upgrade six Navy Aegis warships to perform the ballistic missile defense mission at a total cost of \$200 million. Moreover, on September 17, 2009, President Obama announced his cancellation of the previous Administration's plans to field a high-resolution tracking radar in the Czech Republic and to

deploy 10 ground-based interceptor missiles in permanent silos in Poland.⁴⁰ In its place, the President proposed a four-phase plan. Phase One would rely on Block IA of the SM-3 missile, which would be deployed on existing Aegis warships.⁴¹ Phase One also would base an AN/TPY-2 radar in Europe to provide early detection and tracking of ballistic missiles if launched toward the United States. Phase Two would entail both sea- and land-based deployment of a more capable Block IB version of the SM-3 missile; Phases Three and Four would involve Block IIA and Block IIB missiles that are still under development. (Each block represents a major upgrade in capability from its predecessor.)

In a report published in February 2009, CBO discussed three alternatives to the previous Administration's plans for ballistic-missile defense in Europe. Two of the three are similar to the current Administration's revised plans.⁴² One alternative would use SM-3 missiles deployed on Aegis warships operating at three locations around Europe, supported by two forward-based tracking radar stations; another alternative would rely on land-based SM-3 missiles operating from mobile launchers located at two U.S. bases in Europe (Ramstein Air Base in Germany and Incirlik Air Base in Turkey), supported by two transportable radar units. The Administration's new plan blends elements of these two options and encompasses both sea- and land-based deployment of SM-3 missiles.

For a sea-based concept, maintaining continuous coverage in three locations would require a total of nine ships (for each ship deployed, another would be undergoing maintenance and a third would be in use for training). CBO viewed the fiscal year 2010 request for \$200 million to convert six warships as a first installment in pursuing an approach of upgrading existing warships (or proposed warships that would have been built to perform other missions) to provide missile defense. That approach would reduce costs relative to procuring new ships but would forgo the possibility of deploying those ships to other locations in the world where they could perform other missions. Alternatively, if new ships are needed, an option would be to adapt littoral combat ships for the missile defense mission with a specially developed Aegis module consisting of a version of the AN/SPY-1 radar and vertical launch system cells; CBO has estimated those ships would cost \$650 million each.

40. The White House, "Fact Sheet on U.S. Missile Defense Policy: A 'Phased, Adaptive Approach' for Missile Defense in Europe" (press release prepared by the Office of the Press Secretary, September 17, 2009), www.whitehouse.gov/the_press_office/FACT-SHEET-US-Missile-Defense-Policy-A-Phased-Adaptive-Approach-for-Missile-Defense-in-Europe/.

41. On February 21, 2008, a modified SM-3 Block IA missile fired from the Aegis cruiser U.S.S. *Lake Erie* (CG-70) destroyed a military satellite that was in a deteriorating orbit and carrying the toxic chemical hydrazine. See Jim Garamone, "Lake Erie Satellite Shot" (Pearl Harbor, Hawaii: American Forces Press Service) www.lake-erie.navy.mil/Site%20Pages/Events_Satellite%20shot.aspx.

42. Congressional Budget Office, *Options for Deploying Missile Defense in Europe* (February 2009).

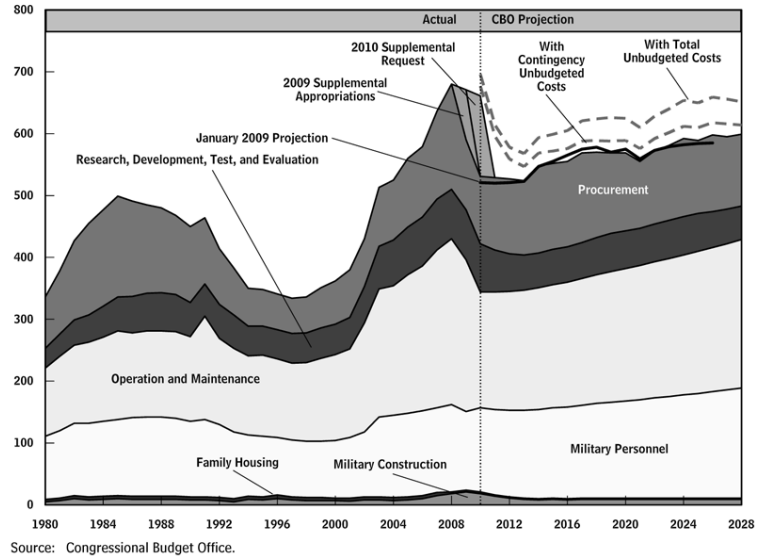
In January 2009 (on the basis of the 2009 FYDP), CBO projected that total investment costs for missile defense would be at least \$10 billion per year, peaking at \$17 billion in 2018; unbudgeted costs could add another \$4 billion annually.⁴³ The Secretary announced in April 2009 that the ABL program would be limited to a single aircraft, that no additional ground-based interceptors would be deployed in Alaska, and that the Multiple Kill Vehicle program would be terminated. With those and other changes, the 2010 request for the Missile Defense Agency would be \$1.4 billion smaller than the amount provided in 2009.⁴⁴ Incorporating those changes, CBO now projects that total investment costs for missile defense would average about \$8 billion annually through 2028, peaking at about \$10 billion in 2014. The total savings, averaging \$2 billion per year, include the specific savings from restructuring the ABL program as described above.

43. Congressional Budget Office, *Long-Term Implications of the Fiscal Year 2009 Future Years Defense Program*.

44. Department of Defense, "Defense Budget Recommendation Statement."

Figure 1.**Past and Projected Resources for Defense**

(Billions of 2010 dollars)

**Figure 2.****Defense Resources as a Percentage of Gross Domestic Product**

(Percent)

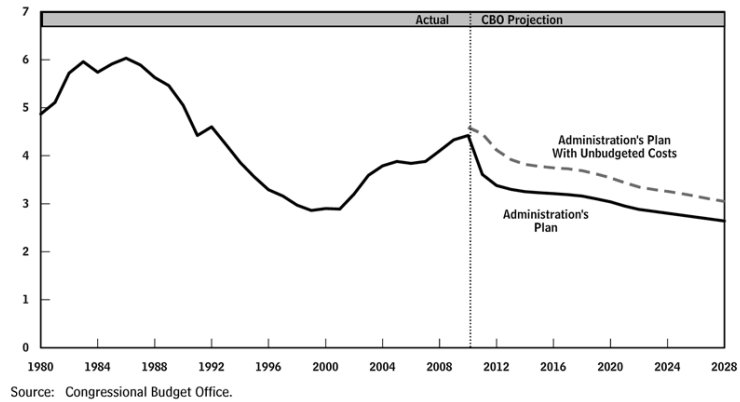
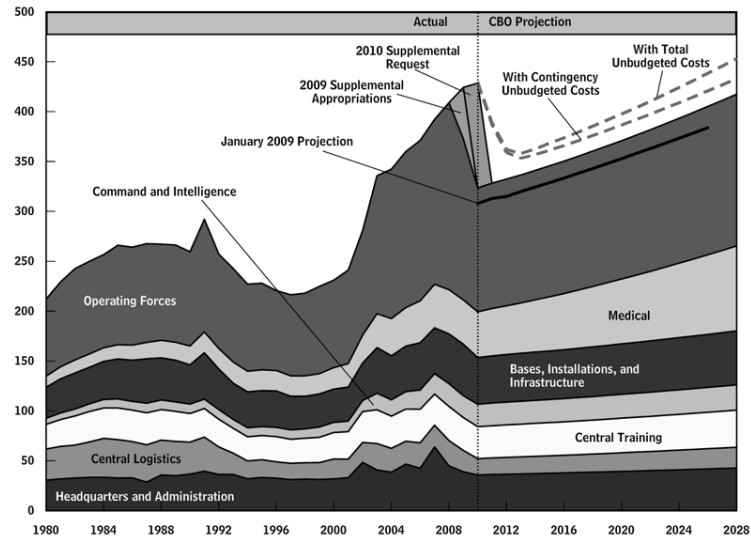


Figure 3.**Past and Projected Resources for Operation and Support**

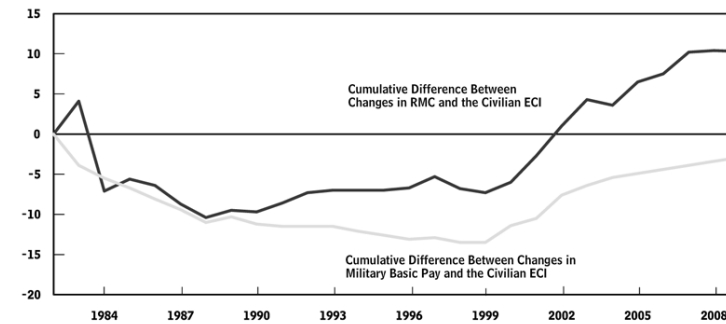
(Billions of 2010 dollars)



Source: Congressional Budget Office.

Figure 4.**Differences Between Military and Private-Sector Pay Raises Since 1982**

(Percent)



Source: Congressional Budget Office based on data from the Department of Defense and the Department of Labor.

Note: RMC = regular military compensation (basic pay, allowances for housing and subsistence, and the federal tax advantage that occurs because those allowances are not taxed); ECI = employment cost index for wages and salaries in private industry.

Table 1.**Past and Projected Resources for Defense in Selected Years**

(Billions of 2010 dollars)

	2009	2010	Projected			Average	
			2013	2020	2028	2010-2013	2014-2028
Procurement	113	109	120	126	116	117	127
Research, Development, Test, and Evaluation	81	79	57	61	54	66	59
Subtotal, Investment	194	187	177	187	169	183	186
Operation and Maintenance	245	188	194	214	240	191	217
Military Personnel	127	136	142	157	178	139	160
Subtotal, Operation and Support	373	324	336	371	417	330	377
Other	28	23	11	11	13	14	12
Total, Regular Defense Budget	595	534	525	568	598	528	574
Additional Supplemental and Emergency Funding	81 ^a	130	n.a.	n.a.	n.a.	n.a.	n.a.
Total Including Additional Funding	676	664	525	570	599	527	575
Total Including Unbudgeted Costs	n.a.	681 ^b	568	627	659	612	631

Source: Congressional Budget Office.

Note: n.a. = not applicable.

a. This figure excludes \$74 billion in other supplemental and emergency funding allocated among the appropriation titles listed above.

b. This figure includes \$17 billion that the Administration has not requested but that CBO projects could be needed.

Table 2.**Past and Projected Resources for Operation and Support in Selected Years**

(Billions of 2010 dollars)

	2009	2010	Projected			Average	
			2013	2020	2028	2010-2013	2014-2028
Operating Forces	161	124	128	139	152	126	140
Medical	44	46	50	65	85	48	68
Bases, Installations, and Infrastructure	52	47	48	51	54	48	51
Command and Intelligence	22	22	23	24	25	23	24
Central Training	33	32	33	35	37	32	35
Central Logistics	21	16	17	19	21	17	19
Headquarters and Administration	39	36	37	39	43	36	40
Total Operation and Support, Regular Defense Budget	373	323	336	371	417	330	377
Additional Supplemental and Emergency Funding	52 ^a	105	n.a.	n.a.	n.a.	n.a.	n.a.
Total, Including Additional Funding	424	429	336	371	417	330	377
Total Including Unbudgeted Costs	n.a.	430 ^b	358	398	453	385	406

Source: Congressional Budget Office.

Note: n.a. = not applicable.

a. This figure excludes \$64 billion in other supplemental and emergency funding allocated among the categories listed above.

b. This figure includes \$1 billion that the Administration has not requested but that CBO projects could be needed.

Table 3.**Past and Projected Resources for Defense Investment in Selected Years**

(Billions of 2010 dollars)

	2009	2010	Projected			Average	
			2013	2020	2028	2010-2013	2014-2028
Ground Combat	10	7	7	13	5	7	10
Ships	15	17	21	25	24	19	25
Aircraft	29	26	31	20	24	29	24
Missiles and Munitions	4	4	5	2	3	4	3
Missile Defense	1	1	2	4	2	1	3
C4ISR	5	9	9	6	3	9	7
Other Procurement	48	46	45	56	55	48	56
Research, Development, Test, and Evaluation	81	77	57	61	54	66	59
Total Investment, Regular Defense Budget	194	187	177	187	169	183	186
Additional Supplemental and Emergency Funding	28 ^a	23	n.a.	n.a.	n.a.	n.a.	n.a.
Total, Including Additional Funding	222	210	177	187	169	183	186
Total Including Unbudgeted Costs	n.a.	227 ^b	199	217	193	213	214

Source: Congressional Budget Office.

Note: n.a. = not applicable; C4ISR = command, control, communications, computers, intelligence, surveillance, and reconnaissance.

a. This figure excludes \$6 billion in other supplemental and emergency funding allocated among the categories listed above.

b. This figure includes \$17 billion that the Administration has not requested but that CBO projects could be needed.

Chairman SPRATT. Thank you very much, Dr. Goldberg. Mr. Daggett.

STATEMENT OF STEPHEN DAGGETT

Mr. DAGGETT. Mr. Chairman, Mr. Ryan, members of the Committee, thanks very much for your invitation to testify. I appreciate it.

Chairman SPRATT. Steve, pull the mic a little closer.

Mr. DAGGETT. When I was here last in February I discussed the major factors that I saw as driving up the cost of defense even more quickly than defense budgets that had been increasing. In the months since February the Defense Department has announced a number of significant changes in the defense program, particularly in acquisition programs, and is also engaged in a Quadrennial Defense Review, which will look ahead 10 to 20 years with a view towards future requirements.

In this statement I want to address first of all the impact of the changes that Secretary Gates announced last April. Second talk about what kind of additional trade offs the Department of Defense might face, given the possibility of limited budgets over about the next ten years, not just within the current future years defense plan but a little bit beyond that. And then third say a few things about what I see as potential even longer term challenges that the Quadrennial Defense Review appears likely to address.

When I testified in February I laid out six major factors that had driven up the cost of defense dramatically in recent years. One was the increase in cost to military personnel. By my account a military service member in 2009 was about 45 percent more expensive than in 1998 after adjusting for inflation.

The increase in cost of operation and maintenance which has continued to grow by two and a half by three percent per year per

troop above base inflation every year since the end of the Korean War and it appeals likely to continue to do so.

The apparently accelerating rate of increase in costs from one generation of weapons to another.

Fourth factor was just apparently worsening DoD's ability to estimate the cost of major programs resulting in cost overruns and delays.

A fifth factor was increasing demands and budget requirements therefore for ground forces which entailed a pretty substantial increase in ground force endstrength and also substantial new equipment requirements.

And then finally DoD over time has been seeing itself facing a much expanded array of challenges in the international security environment. Not just traditional state-on-state conflict with other militaries, but also irregular warfare, disruptive challenges by enemies that would try to exploit our vulnerabilities, and potentially catastrophic effects on the homeland.

And I also saw all of these factors as driving up the cost of defense more rapidly than even very rapid increases in the top line for defense, which as Mr. Spratt said, by historical standards appears to be very robust.

The changes that Secretary of Defense announced in April may have some effect on all of these. Some of the changes will drive up costs. He announced some increases, in particular in Medical care and also social services, particularly for service members returning from aboard. He reaffirmed increases in Army and Marine Corp endstrength, and will be taking those costs into the base budget, which also implies driving up costs at least in the base defense budget. He also announced some increases in production rates for a couple of weapon systems-the F-35 and the Littoral Combat Ship. But the main impact of his statement was to announce termination of a number of major weapons programs. And my view, as Matt said, is that these will likely drive down costs over the long term.

I think they may serve to drive down costs even more than the immediate impact of the cuts in those programs themselves. And the reason is this. That the Administration's decisions appear to go in the direction of narrowing down the number of different new kinds of major platforms that we are building. And to the extent that that remains the case, it creates means for DoD to really pursue increased efficiencies in production.

If you look at tactical aircraft production. The decisions that Secretary Gates announced reduced production really to two major systems: Variance of the F/A-18 fighter aircraft for the Navy and Marine Corp, and of the F-35 for all of the services.

In ship building we are now focused on producing the DDG-51 destroyer, and perhaps with variance of that for future missions LPD-17 amphibious ships, Littoral Combat Ship, and Virginia class submarines. Even in satellites giving up the transformational communications satellite means we will be going back to producing satellites for similar missions of quite proven designs.

To the extent this leads to our focus and production on a relatively smaller number of relatively mature technologies with relatively stable designs, I think there is a possibility for DoD to really work with defense industry to drive down production costs, to

make productivity improving investments on the basis that there is a guarantee of income coming in in the future, to work on production practices, to use more multiyear contracting which improve the financial stability of the program and also drive down costs, to require the industry to engage in much broader competition at the subcontractor level.

So the potentially biggest change is not necessarily in the specify weapons programs that the Secretary announced, but in the long-term kind of pattern of defense industry production.

Same thing in the development side. The termination of the transformational communications satellite, of the presidential helicopter, of the combat search and rescue helicopter for the Air Force. These were all programs that had real technical difficulties, that in effect each tried to go a technological bridge too far, and therefore had run into technical problems and schedule delays and big cost increases.

Now there is still debate about the wisdom of terminating each of them, and of the cost of potential alternatives, but leaving that aside what I see reflected in this is a determination that in the development process we are going to be more careful about the technical risks that we are taking. And the acquisition reformat that Congress passed in May by the way reflects the same basic principal. It requires in general that before there is milestone approval to go ahead with the next stage of design and invest more money we are assured of the technological maturity of the technologies that are going into the system. It means we are not going to try to make as great technical leaps ahead, and that to some degree may be a cost, but the benefit is much more predictability and the cost of systems at the inception and much more stable cost trends in systems as we develop them.

So you know, I don't think we have a full answer as to the long-term impact of the effect of the changes Secretary Gates announced. The effect depends on the extent to which they represent—their continued in the future and represent changes in policy that will apply to weapons production in the future.

That said, looking ahead beyond the current FYDP and beyond the changes that Secretary Gates announced in April, unless defense budgets begin to turn up to some extent, the Defense Department is going to inevitably face a real budget crunch and face some very difficult budget trade-offs. And just not as a way of predicting what the budget would look like, but as a way of illustrating the possible trade-offs I prepared the chart that is now up and is in Figure 1 in your written testimony.

And what I did here was just assume that the defense budget is frozen at the Fiscal Year 2010 level for the next ten years, which is about \$534 billion in 2010, just the DoD budget. And then I said suppose that military personnel costs and O&M costs grow at a given level. For military personnel I assumed just growth at the Employment Cost Index, which as Matt said is a measure of costs in the civilian sector, that has typical increased by about 0.7 percent per year above inflation.

Chairman SPRATT. Can I interrupt you. Does this include 130 billion, 150 billion for overseas deployment?

Mr. DAGGETT. No, it does not. This is excluding overseas contingency operations. I don't talk about that at all. This is just the base defense budget. Okay? And we know that those will come down as well and effect trade-offs as well, but I just wanted to look here at the base defense budget. Okay? So military personnel I assume will grow at a cost of 0.7 percent per year above inflation. That is a pretty limited rate of growth. It is a lot slower than growth in recent years. And the premise is the military service support organizations have gotten for service members most of what they were seeking, so cost growth can level off from now on. That may or may not be true, but that is the projection. And operation and maintenance I assumed that O&M costs are going to increase by 2.7 percent per year above base inflation, as they have historically since the end of the Korean War.

Well what happens to the defense budget in ten years under those assumptions? The answer is that the amount of the budget that remains for defense acquisition to climb substantially. It goes from 186 billion for procurement and R&D, which is about 35 percent in the budget in 2010, down to about 127 billion or 24 percent of the budget in 2020. So it is a decline in real terms after adjusting for inflation about 32 percent. Almost one-third, at a time when the QDR is projecting that we will face a larger number, an array of challenges in the future. It would be very hard to sustain anything like a robust weapons modernization program with that kind of funding.

So I think we face some other trade-offs. And those trade-offs include first of all potential reductions in the size of the force. Are we going to give up on the increases in the Army and the Marine Corps that we will have just completed by the end of 2010, which added 92,000 troops to the force? You can make a strategic argument for doing that, and that is that based on lessons of Iraq and Afghanistan we are going to be more reluctant in the future to commit forces to military actions that would involve a constant rotation of large numbers of forces into long-term stability operations. So you can make a case for that, but it certainly will be a contentious argument.

Will we reduce the size of the Navy and the Air Force and rely instead on higher technology systems? Those are the kind of trade-offs that we face.

An alternative is to modestly increase the budget. If we increase spending by about two percent per year above inflation that adds about \$10-\$11 billion per year to the top line. If you did that for five years you would have about \$50 billion more by the end of that period, and if you put that into acquisition that would get the acquisition accounts up more towards what they were in 2010.

Another alternative that the QDR certainly will explore is to try to look at ways to rein in operating costs. Can we draw down the 2.7 percent per year increase in O&M accounts? For my part, DoD has tried to do that in the past by the way. In the 1990s they always projected from year to year that O&M accounts would level off, and they engaged in a number of vigorous management reforms to try to accomplish that. They also closed a number of military bases in the 1990s with three rounds of military base closures to

try to get infrastructure costs down. None of that really succeeded in drawing down the rate of growth of O&M.

So my view would be to be quite skeptical about potential impact of efficiency measures. It doesn't mean you shouldn't try, but in the past these efficiency measures seem to have served to keep O&M growth down to the historical level rather than to achieve additional savings.

So budget trade-offs over the next ten years look potentially pretty severe, unless there is some room to have at least modest increases in the top line for defense.

Final discussion, and I will be very brief about this, but it opens up a very, very wide array of questions, and that has to do with the current Quadrennial Defense Review.

QDRs in the past have often been subject to quite a lot of criticism, frankly for not being radical enough. The argument has been it is been very difficult to trace each Quadrennial Defense Review to any significant changes either in the size of the force or the composition of the force or the decision whether to go ahead with certain major weapons programs or not.

My view is that is a bit unfair. That it is I think more realistic to look at QDRs as snapshots of an ongoing discussion inside the Defense Department and in the broader national security community of changes in the international security environment and how the Defense Department, as well as other agencies, need to adjust to that. And when you look at QDRs that way you can see a real progression. The initial pre-QDR Defense Reviews, the base force review of 1990, the bottom up review in 1993 really provided a rationale for maintaining strong military forces after the end of the Cold War, but those forces looked very much like a smaller version of Cold War forces.

Beginning in 1997 and with the 2001 QDR and 2006 QDR DoD began to say quite explicitly that that wasn't adequate, that the new requirements of changes in the international security environment required not just a smaller version of Cold War forces but other kinds of capabilities. In the Army, for example, required in particular the ability to rotate forces forward on a regular basis without disrupting personnel patterns throughout the force. Prior to the 1997 QDR the Army was really organized on a basis that required large scale mobilization of additional troops to fill out deploying units. After the 1997 QDR it was pretty clear that senior leadership of DoD regarded that as inadequate, and finally in 2001 the Army adopted a new organizational structure around modular brigades that could be deployed separately, but most importantly were fully manned in peacetime, and therefore could rotate into a conflict and rotate back without requiring that you draw personnel from other units, thereby disrupting their readiness. So the Army over time, although very slowly, did adapt to changes in the international security environment.

The new QDR is, based on what senior officials have said, likely to address some very different kinds of challenges in the future. The discussion has been first of all about not just irregular warfare or catastrophic dangers to the homeland, but what people term hybrid threats. That is think of Hezbollah and Hamas using relatively sophisticated weapons like anti-ship cruise missiles or fairly

accurate missiles to attack Israel. Or in Iraq the insurgents using modern shaped charged munitions to attack our armored vehicles. That is pretty advanced technology in the hands of what we used to look at as the low end of the conflict spectrum.

Similarly we think that even future near-peer competitors, countries that can match our technological capability to some extent at least, wouldn't limit themselves to fighting us force on force where we have advantages. They would use irregular warfare, they would use other advanced means to try to exploit our weaknesses. They call it high-end asymmetric. That can include cyber warfare, efforts to disrupt communications, anti-satellite weaponry, efforts to deny access of U.S. military ships or ground-based forces to the region through anti-access strategies. They can use some older technologies, but also new means of attacking.

And the new QDR really appears to be focusing on that based on speeches under Secretary of Defense Flournoy and some others have made.

There is a real debate however about the pace at which those kinds of threats are going to materialize. Andy Krepinevich of the Center for Strategic and Budgetary Assessments, who by the way has been invited by DoD to sit on a red team that is reviewing the QDR, has been very critical of DoD, he says, for not adjusting rapidly enough to these changes that high-end asymmetric warfare are creating. Specifically he has talked about area denial strategies. He argues that it will be very difficult in the future for the U.S. to get naval forces anywhere close to the littoral areas near a conflict zone, and he believes that that implies there should be much less investment in short-range tactical air and much more investment in longer range systems, and in other technologies like submarines that are more difficult to attack than can launch missiles ashore.

His view is starkly at odds with what Michele Flournoy, the Under Secretary of Defense for policy has laid out. In an article in the Proceedings of the U.S. Naval Institute she acknowledged that over time these kinds of technologies were developing, but she said that for many years ahead the United States appears to have a margin of security in these kinds of technologies.

I can't think of a starker difference of view. Krepinevich has argued that some elements of the U.S. force for projecting power are in, in his words, "precipitous decline," and Secretary Flournoy says, "We have a margin of superiority that we can rely on for some time."

My view is we need to face that debate head on and discuss it directly, and it ought to be a matter for discussion in the QDR and also in the Congress. And these and other asymmetric challenges really have profoundly important long term budget impacts. Will we reduce investments and things like F-35 in favor of long-range strike systems that could be unmanned aerial vehicles that can loiter? What do we need to do to deal with the anti-satellite threats? Do we need to develop a whole new generation of satellites that are smaller that can be kept in reserve and launched when needed? To do that we would need a much larger launch capability as well. That could be fairly expensive. In the past we have tended to look at these kinds of asymmetric threats as requiring only marginal changes in investment.

My view is that is not necessarily the case. It could require much larger changes in investment, particularly if they are developing as rapidly as people like Krepinevich and others think.

With that I would be glad to take your questions.

[The statement of Stephen Daggett follows:]

PREPARED STATEMENT OF STEPHEN DAGGETT, SPECIALIST IN DEFENSE POLICY AND BUDGETS, CONGRESSIONAL RESEARCH SERVICE

Chairman Spratt, Ranking Member Ryan, distinguished Members of the Committee, thank you for your invitation to discuss the cost of current defense plans and budget issues facing the Department of Defense. I am Stephen Daggett, Specialist in Defense Policy and Budgets with the Congressional Research Service. When I testified before this Committee last February, I discussed factors that have driven up the cost of defense substantially over the past several years. In April, DOD announced some significant changes in its current plans and additional changes may result from the Quadrennial Defense Review that is now underway. This statement will address the potential impact of the recent defense changes, additional budget trade-offs that may be necessary in the remainder of the coming decade, and some of the more long-term defense budget and policy issues that may be addressed in the current QDR.

Specifically, the discussion addresses three very broad questions:

- How have the program decisions that Secretary Gates announced last April affected trends in the cost of defense?
- What additional trade-offs might the Defense Department face in the future in view of projections of substantial federal budget deficits through the next decade?, and,
- In view of experience with earlier defense reviews in 1990 and 1993 and with prior QDRs in 1997, 2001, and 2006, is the Defense Department keeping up with rapid changes in the international security environment, and what more far-reaching changes in force posture and budgets might it be in order for the QDR to consider?

FACTORS DRIVING UP THE COST OF DEFENSE

My testimony before the Committee last February began by noting that recent defense budgets, even without including large supplemental appropriations for war costs, appear by historical standards to be quite robust. Nonetheless, leaders of each of the military services were warning about substantial budget shortfalls. To explain the discrepancy, I cited six factors that have driven up the cost of defense substantially in recent years, including

- Dramatic growth in the cost of military personnel, especially since the end of the 1990s (45% growth above inflation between FY1999 and FY2009);
- Continuing growth of operation and maintenance costs, relative to the size of the force, at a pace of two-and-a-half to three percent per year above inflation every year since the end of the Korean War;
- Apparently accelerating growth in the cost of new weapons programs compared to costs of earlier generations of systems for similar missions;
- Inaccurate and apparently worsening estimates of weapons costs at the inception of major development programs and subsequent cost overruns and schedule delays;
- New requirements for the ability to rotate large numbers of ground forces into long-lasting stability operations, leading to significant increases in ground force end-strength and substantially higher investments in new ground force equipment for force protection, communications, transportation, and other purposes; and
- Demands for capabilities to cope with an expanded array of security challenges ranging from conventional conflict, to irregular warfare, to efforts by future foes to disrupt U.S. military power by exploiting vulnerabilities, and to threats of catastrophic attacks on the U.S. homeland.

In recent years, my testimony concluded, these trends have driven up the cost of defense too rapidly even for substantially growing defense budgets to keep up and, unless they were reined in, it would be increasingly difficult for the Defense Department to carry on its plans within budgets that most analysts thought likely because of constraints imposed by projected federal deficits.

THE IMPACT OF RECENT CHANGES IN DEFENSE PLANS

Since that Committee hearing in February, the Defense Department has made significant changes in long-term defense plans that Secretary Gates announced in April. Some changes called for higher spending, particularly for health care and social services for personnel returning from combat and for their families. The Secretary also reaffirmed plans to increase ground force end-strength, with costs being absorbed in the base defense budget rather than in supplemental appropriations. Many of the changes announced in April, however, particularly the termination of several major weapons programs, might very well limit future costs, especially to the extent they mark changes in policies that will affect designs of future weapon systems. In addition, in May, Congress passed a major defense acquisition reform measure, the Weapon Systems Acquisition Reform Act of 2009, P.L. 111-23, which, if implemented effectively, might also limit weapons cost growth.

The changes in major weapons programs that Secretary Gates announced might be particularly significant to the extent they provide an impetus to pursue more efficient production practices for systems that were not eliminated. For tactical fighter aircraft, the Defense Department has narrowed production to two platforms—various versions of the F/A-18 Navy-Marine fighter and of the multi-service F-35 Joint Strike Fighter. In shipbuilding, while there are some uncertainties, the effect of recent decisions may be to allow fairly long and relatively large production runs of DDG-51 destroyers, perhaps with some variants; of the Littoral Combat Ship (LCS); of new ships based on LPD-17 amphibious ship; and of Virginia-class submarines. Even in satellites, the termination of the Transformational Communications Satellite (TSAT) program will entail reliance on improved designs of existing, more proven technologies. To the extent the changes result in regular, predictable, and robust annual production runs of technologically mature systems with stable designs, both acquisition officials in the government and production teams in industry might focus on efficiency measures. Weapon costs might be driven down considerably by such measures as productivity improving investments and production practices; cost saving financial mechanisms including multiyear contracting; and expanded use of competitive sourcing in subcontracting.

Similarly, in the weapons development process, the termination of programs that had experienced significant cost growth and schedule delays—including TSAT, the presidential helicopter, and the Combat Search and Rescue (CSAR) helicopter—may reflect a determination to ensure that development efforts rely on proven technologies before committing to large development and production investments. The Weapons Acquisition Reform Act provides further statutory support for DOD acquisition policies that require achievement of appropriate levels of technological maturity in key elements of development programs before milestone approval for progressively more costly stages of a project. The Act also creates an independent cost analysis directorate. While some of the program terminations remain matters of debate, there appears to be a growing consensus on the general principle that development should proceed on the basis of sufficient knowledge about the availability and cost of key technologies throughout the development process in order to avoid excessive technical risk that has contributed to delays and cost increases in the past.

TRADE-OFFS IN FUTURE DEFENSE BUDGETS

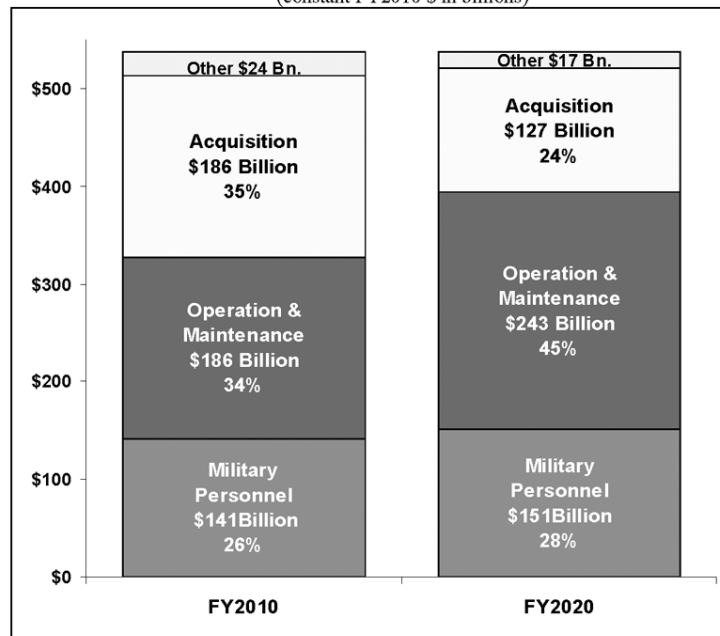
While progress in these areas may, if pursued consistently in the future, help ameliorate some of the factors that have been driving the cost of defense so high, budget trade-offs remain an issue for the Defense Department, particularly in the years following the current Future Years Defense Plan (FYDP), which runs through FY2015. A key issue for the QDR may be how to balance potential trade-offs between the size of the force, the pace of weapons modernization, and the size of future defense appropriations, particularly in view of currently projected long-term federal budget deficits.

To date, DOD officials have not said much about how the QDR will address intermediate- and longer-term budget issues. Officials have said that, at least for initial planning purposes, the QDR assumes that the base defense budget, not including war-related funding, will be essentially flat for the next five years, with growth sufficient only to cover inflation—i.e., “zero real growth.”¹ And they have acknowledged that this will require at least modest trade-offs between programs. At the end of July, David Ochmanek, a leader of the Pentagon’s QDR integration group, told defense reporters that the QDR had already led to a decision to move about \$60 billion over the FYDP into programs supporting current operations—“the wars we are in” as Secretary Gates has put it—and that the military services were developing lists of cuts in other programs to act as bill payers.

A shift of \$60 billion within the DOD FYDP is by no means unusual. On the contrary, it is well within the range of adjustments that the Defense Department makes in every annual budget cycle. But trade-offs in the years beyond the current FYDP will have to be much more substantial unless spending turns up at least modestly within the next few years. To illustrate that point, a very simple exercise may be useful. Consider, not as a prediction, but only for the sake of analysis, what would happen to the allocation of funds within major categories of the defense budget between FY2010 and FY2020 if (1) the overall level of spending is frozen at the FY2010 level for the next ten years, (2) military personnel funding grows at the historical rate of the Employment Cost Index (ECI), which increased by 0.7% per year above base inflation between FY1981 and FY2005, and (3) DOD operation and maintenance accounts are assumed to grow at the historical rate of 2.7% per year above inflation.²

Figure 1 shows the allocation of funds between (1) military personnel, (2) operation and maintenance, (3) acquisition (the sum of procurement plus R&D funding), and (4) other programs in the Department of Defense base budget, not including war-related supplemental funding, in FY2010 compared to FY2020, on those assumptions. The result, as one would expect, is a dramatic reduction in funding for weapons acquisition, which declines, in constant FY2010 prices, from \$186 billion and 35% of the budget in FY2010 to \$127 billion and 24% of the budget in FY2020.³ In relative terms, that is a cut of 32% in funding to replace equipment and modernize the force between FY2010 and FY2020 in the base defense budget.

Figure 1. DOD Base Budget with No Real Growth:
FY2010-FY2020
(constant FY2010 \$ in billions)



Source: CRS based on the FY2010 Department of Defense budget request, with growth of 0.7% per year in Military Personnel accounts and 2.7% per year in Operation and Maintenance accounts through FY2020.

While, again, this is not intended as a prediction of likely budget trends, it may suggest a need for the Defense Department to discuss intermediate-term budget trade-offs in the QDR. CBO and other budget projections over the next ten years show potential budget deficits as a percentage of GDP that have, in the past, been followed by long-term limits on defense spending.⁴ The alternatives to a steep reduction in acquisition accounts are (1) a resumption of at least modest real growth in the overall defense budget, (2) cuts in the size of the force, or (3) measures to reduce operating costs. Each 2% increase in the defense budget above inflation would add

about \$10 billion in funds available for acquisition accounts. A cut of 100,000 active duty troops would save \$12-15 billion per year in military personnel and in directly related operation and maintenance costs. A smaller force would entail limits on U.S. military capabilities—one choice might be to reduce requirements for ground forces for long-term stability operations.

The need for difficult budget trade-offs could, of course, be ameliorated to some extent by further limiting defense costs. The QDR will certainly address that issue. Business process reform is one of five focus areas in the original QDR guidance that Secretary Gates issued in April, and one of five QDR issue teams is responsible for addressing defense costs. Earlier QDRs also led to efforts to reduce costs by reducing infrastructure, outsource activities, and improving contracting procedures.

How much DOD can save—and how much it should count on saving—is a matter that deserves careful consideration. In the past, the Defense Department has perennially projected that operation and maintenance (O&M) budgets, which, as I noted, have grown historically at 2.5 to 3 percent per year above inflation per active duty service member, would level off, freeing up funds for weapons investments. Throughout the 1990s, however, projected savings in O&M did not materialize, in spite of concerted efforts at management reform, and procurement accounts ended up being cut from year to year to finance must-pay-bills in the operating accounts.

In the FY2010-FY2020 budget exercise shown in Figure 1, the assumption was that O&M would continue to grow at the historic rate of 2.7% per year above inflation. Given past experience, DOD will have strong incentives in the QDR to assume that reforms will slow that rate of growth. But experience also shows that reforms generally serve to keep O&M cost growth down to historical levels rather than to achieve additional savings. In addition, the FY2010-FY2020 analysis shown above assumes much more limited increases in military pay and benefits than Congress approved in the years between FY1999 and FY2009. The premise is that service members have already won most of the increases in pay and benefits that support groups were seeking, so growth may be more modest in the future. That assumption may not be correct, however, and the analysis may well underestimate personnel costs. Long-term budget trade-offs might be more difficult to the extent personnel costs grow faster.

HAVE QDRS BEEN RADICAL ENOUGH?

As well as discussing budget trade-offs over the next decade or so, the current QDR may be an occasion for considering more far-reaching, longer-term changes in policy with potentially very substantial effects on budget planning. Perhaps the central issue in debate over earlier QDRs has concerned whether the Defense Department has kept up with the pace of global change and has adjusted defense plans accordingly. That issue appears likely to remain a matter of debate over the current QDR.

The current QDR, on which the Defense Department is required to provide a report early next year, is the fourth such review mandated by a provision that Congress originally included in the FY1997 National Defense Authorization Act and later made permanent. QDRs in 1997, 2001, and 2006 were preceded by two earlier, similarly broad reviews—the “Base Force” analysis that the Joint Chiefs carried out under then Chairman Colin Powell in 1990, and the “Bottom-Up Review” conducted at the beginning of the Clinton Administration under Secretary of Defense Les Aspin in 1993.

The Base Force analysis and the Bottom-Up Review (BUR) were intended first of all to establish a rationale for maintaining strong military capabilities as the Cold War came to an end. The BUR, following the Persian Gulf War of 1991, established as a basic planning principle a requirement that U.S. military forces should be able to prevail in two nearly simultaneous regional conflicts—now termed “Major Theater Wars” (MTWs)—comparable to the war with Iraq. Planners did not neglect post-Cold War requirements for capabilities to manage other kinds of operations. Rather, the BUR argued that forces able to prevail in two major wars would also be able to meet less demanding requirements.

By the time Congress enacted the original QDR requirement, however, that premise was being very widely questioned. Ongoing, long-term U.S. military missions in Bosnia and later in Kosovo, plus enforcement of no-fly zones in Iraq, were straining the Army and Air Force, neither of which was organized to sustain long-term rotational deployments abroad. The Army, in particular, was still organized in a way that required the mobilization of large numbers of reserves and the reassignment of substantial numbers of active duty troops in order to fill out units selected for deployment. The effect was to disrupt Army personnel management across the

whole force and to degrade the readiness of many non-deployed units in order to support even a modest rotational deployment of 5,000 troops to the Balkans.

The 1997 QDR reflected efforts to assess and later ameliorate some of these strains. Among other things, it identified so-called low density-high demand units; mandated additions to some of the more highly stressed forces, including military police and civil affairs teams; made offsetting reductions in other units; and undertook systematic studies of the burdens of recent and ongoing contingency operations on military personnel. It also included a substantially new statement of the missions of U.S. military forces that stressed military engagement and other measures to make use of military forces in non-conflict situations to improve ties with foreign nations and prevent regional conflicts.

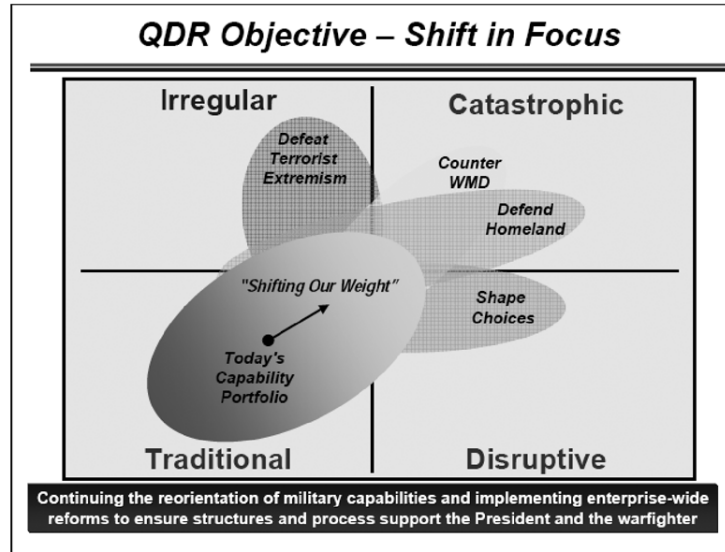
As one means of encouraging a more far-reaching policy reassessment, Congress required as part of the 1997 process the appointment of an independent group, called the National Defense Panel, to provide input to the QDR and then to prepare an alternative assessment. The NDP's final report emphasized the prospect that future foes would not challenge U.S. conventional military power directly, but would instead use asymmetric means to exploit U.S. weaknesses. The panel warned that critical U.S. capabilities, particularly the ability to project power far around the globe from bases in distant regions and naval forces offshore, would be increasingly at risk because of the diffusion of advanced technologies. The NDP recommended new programs, including converting ballistic missile submarines to launch cruise missiles against targets ashore, and substantial annual investments in experimental technologies to cope with rapidly evolving challenges.

The NDP report is in many ways representative of the discussion, in Congress and elsewhere, about the apparent limitations of successive QDRs. Even though the 1997 QDR, by most accounts, reflected considerable progress in addressing new challenges, the NDP report was quite critical of the Defense Department for not adjusting rapidly enough to accelerating changes in the international security environment. Critical as it was, the NDP also received a respectful hearing from senior leaders—the authors of the QDR—inside the Pentagon.

In general, successive QDRs can be seen as progressive steps away from force planning that remained wed to weapons and organizations inherited from the Cold War and toward a much fuller appreciation of the extraordinarily broad array of challenges facing the United States in first half of the 21st Century. The 1997 QDR was succeeded by the 2001 QDR, which emphasized the need to build a full range of capabilities to cope with often unpredictable dangers. It added to the two-war requirement a mandate to protect the homeland from potentially catastrophic attacks and to maintain an effective deterrent presence in four critical regions of the globe.⁵

The 2006 QDR, the first composed after the attacks of September 11, 2001, included the “new challenges” framework that has since shaped much of the discussion of defense planning. Figure 2, taken directly from the a DOD briefing on the 2006 QDR, illustrates the premise—which Secretary Gates has pursued since then more assiduously—that investments should be shifted from means of engaging in traditional, conventional force-on-force conflicts, in which the United States still appears to have a significant margin of superiority, and toward irregular, disruptive (i.e., asymmetric attacks on U.S. vulnerabilities), and catastrophic (WMD attacks on the homeland) challenges.

Figure 2. 2006 QDR Four Challenges Framework for Setting Priorities



Source: Department of Defense, Briefing Slides on the 2006 Quadrennial Review, February 3, 2006.

Based on briefings by senior DOD officials, the current QDR appears likely to push the discussion of the international security environment, with implications for force planning, somewhat further. Secretary Gates and other officials have, for example, stressed that distinctions between traditional, irregular, and disruptive challenges are eroding. Groups like Hezbollah and Hamas have employed quite sophisticated short-range missiles, including anti-ship missiles, supplied by sponsoring nations. Insurgents in Iraq and Afghanistan have used modern shaped-charge munitions in IEDs to attack armored vehicles. Analysts describe the result as "hybrid warfare," in which non-state groups, considered to operate at the lower end of the conflict spectrum, employ quite advanced technology, a merger of irregular warfare with advanced means of warfare.

Officials also emphasize that even relatively sophisticated future enemies, including peer- or near-peer competitors, will almost certainly employ whatever means they believe will be effective in a conflict with the United States and its allies, including irregular and disruptive asymmetric attacks and even assaults on the U.S. homeland. A focus of the current QDR appears to be on what officials term "high end asymmetric" threats, meaning challenges that a technologically sophisticated and relatively wealthy opponent might pose in an effort to prevail without having to defeat the U.S. on its own terms. High-end asymmetric warfare was another focus of the April QDR guidance, and it is the subject of one of the QDR's issue teams.

In focusing on high-end asymmetric challenges, part of what defense officials are thinking may be reflected in recent discussions by Under Secretary of Defense for Policy Michele Flournoy, who has stressed the need to safeguard what she and others call "the global commons," meaning air, sea, space, and cyberspace means of transport, intelligence, and communications.⁶ Threats to the global commons could involve the use of some new technologies, including anti-satellite devices (not just weapons but jammers) and cyber-attacks. They could also involve aggressive, wide-scale use by possible future foes of new versions of older technologies. In attacking sea lanes, for example, enemies could use high-speed small boats packed with high explosives (perhaps with suicide pilots); advanced, very quiet diesel-electric submarines with highly capable munitions; smart sea mines that can be deployed in large numbers, hidden, maneuvered, and activated when needed; short- to intermediate-range ballistic missiles with highly accurate and perhaps even maneuverable warheads to attack ships as well as fixed sites; and long-range, stealthy anti-ship cruise missiles. Some of these technologies, particularly ballistic and cruise missiles, could also be used to attack U.S. forward bases in regions of conflict.

Taken as a whole, discussions of security challenges in successive QDRs appear to represent considerable progress over time. The issue, however, is whether the progress has been rapid enough, and, more importantly, whether it has led to sufficiently rapid changes in policy. One goal Congress had in requiring quadrennial defense reviews was to push the discussion of post-Cold War force requirements further. QDRs may have helped to some degree in doing so, simply by requiring senior DOD leaders to think systematically about long-term issues. At the same time, it would be hard to say that QDRs have fully anticipated the evolving nature of future threats. On the contrary, they seem in many cases to have lagged behind emerging threats.

Moreover, changes in military force posture appear to have been even slower to mature. It took the Army until 2001, just on the verge of subsequent conflicts in Afghanistan and Iraq, to begin implementing a new force posture based on more deployable, modular brigades that were sufficiently manned in peacetime to be deployed without disrupting personnel movements over the whole of the force. In general, earlier QDRs appear to constitute snapshots of progress in ongoing discussions of strategy rather than radical departures from earlier views—an evolutionary process driven by the pressing need to adjust to unexpected events, rather than anything revolutionary.

This raises what may be the key issue for Congress in assessing the current QDR. Will this QDR be another in a line of modest adjustments to global changes, or will it more fully anticipate the impact on U.S. security of fast-moving global trends? A goal of DOD's current leadership appears to be, not merely to identify the range of challenges facing the nation, but also to establish priorities in addressing them. But will this include not only identifying areas that may warrant greater investment, but also capabilities that may be becoming obsolete?

One common criticism of the “capabilities based” analysis of the 2001 and 2006 QDRs, even as they helped to broaden awareness of the range of threats, is that the analytical framework did not help much in allocating resources away from some areas and into others. Leaving aside whether such criticism is fair, the current Administration has emphasized the need to analyze specific threats in order to establish priorities. The question that follows is, how boldly will the current QDR address the potential need for major changes in forces in view of its assessment of new challenges?

To give one example of the kinds of more radical changes in force posture that the QDR might address, consider the long-standing debate over anti-access/area denial strategies. The issue has been debated at least since the National Defense Panel discussed it in 1997. A “Red Team” established as part of the 2006 QDR, and headed by Andrew Marshall, director of the Office of Net Assessment, also discussed it and recommended some far-reaching changes in force structure, including a cut of up to one-third in the number of short-range tactical fighter aircraft and an increase in funding for longer-range strike systems. Now a similar “Red Team” has been established for the current QDR, also co-chaired by Marshall, and it includes prominent advocates of changes in forces to cope with anti-access/area denial strategies. They include Andrew Krepinevich, who served on earlier panels as well, and who has long highlighted the issue, and retired Marine Lieutenant General Paul Van Riper, who, in a major war game, called “Millennium Challenge 2002,” directed a “Red Force” group that exploited with great effect creative means of disrupting U.S. forces in a Persian Gulf-type scenario.

It is important to note that the Defense Department has not ducked the issue. The National Defense Panel and later internal Red Teams were not suppressed or dismissed—on the contrary, the Defense Department has appeared to welcome the involvement of some forceful critics of some of its policies. After he read Krepinevich's recent book, *7 Deadly Scenarios*, Secretary Gates reportedly directed the QDR team to incorporate Krepinevich's examples into its set of planning exercises.⁷

That said, there appears to be a considerable gulf between the urgency that Krepinevich and others attach to the issue and views of senior DOD officials. In a recent article in *Foreign Affairs*, Krepinevich characterized current U.S. means of projecting and sustaining power around the globe—a capability now unique to the United States and also extremely expensive to maintain—as a “wasting asset.” “Several events in recent years have demonstrated that traditional means and methods of projecting power and accessing the global commons are growing increasingly obsolete,” he wrote. Citing General Van Riper's success in *Millennium Challenge*, which, he says, led to the early loss of half the U.S. ships deployed in a model conflict with Iran in the Persian Gulf, Krepinevich concluded:

Van Riper's success should have served as a warning: projecting power into an area of vital interest to the United States using traditional forces and operational

concepts will become increasingly difficult. Indeed, these means and methods are at great risk of experiencing significant, perhaps even precipitous, declines in value.

In the real world, Iran and other states can buy high-speed, sea-skimming ASCMS [anti-ship cruise missiles] in quantity. In confined waters near shore, U.S. warships would have little warning time to defend against these weapons. The same can be said of high-speed suicide boats packed with explosives, which can hide among commercial vessels. Widely available modern sea mines are far more difficult to detect than were those plaguing the U.S. fleet during the 1991 Gulf War. Quiet diesel submarines operating in noisy waters, such as the Strait of Hormuz, are very difficult to detect. Iran's possession of all of these weapons and vessels suggests that the Persian Gulf—the jugular of the world's oil supply—could become a no-go zone for the U.S. Navy.⁸

China, too, he says, is concentrating on anti-access/area denial capabilities as well as the ability to disrupt U.S. freedom of action in space and cyberspace.

In contrast, Under Secretary Flournoy and co-author Shawn Brimley, acknowledge similar challenges, but come to a starkly different conclusion about the immediacy of the threat:

* * * barriers to entry for both state and non-state actors to develop and field capabilities that can pose challenges to U.S. and allied freedom of action will lower substantially over time. The proliferation of knowledge and technology will allow an increasing number of state and non-state actors to deploy anti-access capabilities and high-end asymmetric technologies that can put allied infrastructure at risk and hamper U.S. power projection.

While these trends are already apparent today, their enumeration should not be interpreted to mean that U.S. dominance in, for example, space-based capabilities or in blue-water naval power projection is being eroded at a precipitous pace. Far from it—America's military will remain without peer for some time in the ability to project and sustain substantial military power from the air and sea over large distances.

These trends are, however, harbingers of a future strategic environment in which America's role as an arbiter or guarantor of stability within the global commons will become increasingly complicated and contested.

What evidence the Defense Department has to support the conclusion that power projection capabilities are not "being eroded at a precipitous pace," is a matter of critical importance. This judgment appears to be at odds, to some degree at least, with the conclusions of the 2006 QDR Red Team, as well as with the views of Krepinevich and other well-regarded independent analysts. A measure of the value of the QDR may be how directly and effectively it addresses this and similar issues that raise questions about the pace at which the Defense Department is adjusting to changes in the international security environment.

The amount of new investment that may be needed to cope with asymmetric threats may very well be substantial. If area denial strategies are effective in forcing shorter-range U.S. forces away from regions of conflict, for example, investments in longer-range air- or even space-based strike systems might be needed, particularly for use in the early stages of a conflict. The task of striking against mobile ballistic and cruise missile launchers remains challenging, and much larger investments in intelligence, surveillance, and reconnaissance systems for the mission, as well as in long-range and loitering strike systems, might be required. One alternative may be a substantial increase in submarines and submarine launched weapons. Defenses against ballistic and cruise missiles might also be required in very large numbers. Cost exchange ratios may not favor existing sea- or land-based missile defense systems, and new investments in air-launched anti-missile systems may be needed.⁹

Other asymmetric threats could also require expensive measures in response. Defense against anti-satellite systems might require not only measures to protect current generations of large satellites, but, as many have proposed, the development of smaller satellites for key missions that could be launched in substantial numbers in the run up to a conflict. This might also require large investments in launch systems.

The Cold War was punctuated by occasional, unexpected international crises, but, in retrospect defense planning was characterized by a remarkable degree of stability. The post-Cold War era, in contrast, appears to be defined both by a succession of unpredictable challenges and by the accelerating pace of global change. Experience with earlier QDRs suggests that the Defense Department may sometimes be slow to adjust to new challenges, and that institutional inertia may make senior leaders reluctant to pursue far-reaching changes in policy. The central issue for this and future QDRs may be how effective they are in turning investments that will

determine U.S. military capabilities twenty years and more in the future, in the right direction.

ENDNOTES

¹In questions and answers following a presentation at the Center for Strategic and International Studies (CSIS) on April 29, 2009, Under Secretary of Defense Michele Flournoy said that QDR budget planning was focused strictly on the FYDP—audio and video recordings are available on line at CSIS, though not a transcript. Also see David Ochmanek, Deputy Assistant Secretary of Defense for Force Planning, Interview with the Defense Writers Group, July 28, 2009, of which a transcript is available on line from Air Force Magazine.

²The Employment Cost Index is a Bureau of Labor Statistics measure of the average change of pay and benefits in the overall economy. The annual real growth in DOD O&M accounts is a CRS calculation that measures the change per active duty service member in O&M funding excluding funding of overseas contingency operations.

³This analysis is based on a discussion with Hugh Brady of the Raytheon Corporation of a forthcoming defense industry 10 year budget projection under the auspices of TechAmerica.

⁴Congress passed the original Gramm-Rudman-Hollings deficit control act in November 1985 after the federal budget deficit exceeded 6% of GDP in FY1983. Defense spending subsequently declined in real terms every year until FY1999, when the federal budget ran a surplus.

⁵The 2001 QDR articulated what it called the 1-4-2-1 force planning construct, which called for forces to (1) protect the homeland, (4) deter aggression in Europe, Northeast Asia, the East Asian littoral, and Southwest Asia and the Middle East, (2) simultaneously halt attacks in two regions, and (1) win decisively in one major conflict.

⁶Michele Flournoy and Shawn Brimley, "The Contested Commons," Proceedings of the U.S. Naval Institute, Vol 135, No. 7, July 2009.

⁷Andrew F. Krepinevich, 7 Deadly Scenarios (New York: Bantam Books, 2009). Christopher J. Castelli, "QDR Shakes Up Planning Scenarios for Future Military Missions," Inside the Pentagon, May 28, 2009.

⁸Andrew F. Krepinevich, "The Pentagon's Wasting Assets," Foreign Affairs, July/August, 2009, Vol. 88, Issue 4.

⁹There has been some discussion of using upgrades of Sparrow or AMRAAM air-to-air missiles for missile defense.

Chairman SPRATT. Thank you both for excellent testimony in a fairly short period of time. A good sweep of not just where we are, but where we seem to be going and what some of our options are.

Would you just for the record and for elaboration give us an idea of what has happened in the acquisition programs? What has been the rate of inflation, the rate of cost growth over the last 10, 15 years? Either one of you or both.

Mr. DAGGETT. Yeah, let me say one thing about—Matt, why don't you go ahead first.

Mr. GOLDBERG. We have seen programs that coming out of development into production are 20, 25—ultimately 20, 25, 30 percent more expensive to actually build than what was predicted coming out of development, and those kind of numbers have been with us for a long time. There hasn't really been much change or progress.

Mr. DAGGETT. Yeah. Actually when I was here last February I provided a chart, and actually I did provide it if we can find it, which was just a recapitalization rates of major systems. And one of the leaders of the business projection units at the Boeing Corporation, Cecil Black did this, and I have just adopted it a little bit. And what he did was look at production rates of major weapons programs in 1985 compared to production of similar systems in 2008. Starting from the premise that in constant 2008 dollars we were actually spending about the same amount in acquisition. There was about \$200 billion in procurement and in R&D. Yeah, here is the chart.

In both years. So with \$200 billion in money for acquisition how many of different kinds of various systems could we buy in '85 as opposed to 2008? And here is what he found. For tactical fighters in 1985 we bought 338 new tactical fighters, 56 in 2008. In ships we bought 23 new ships in 1985, 7 in 2008.

Chairman SPRATT. Is this apples to apples?

Mr. DAGGETT. Yeah, well that is the point. They are ships for similar missions, yeah, but they have become much more expensive individually. And because they have become that much more expensive individually we can afford only many fewer of them.

Chairman SPRATT. Yeah.

Mr. DAGGETT. I mean it does address your point in general, but that is the key point, that the intergenerational cost growth between major systems has accelerated so much that we are finding it very difficult to replace existing equipment on a one-for-one basis given budget constraints.

In fighter aircraft the main low-end fighter in 1985 was the F-16, which at the time cost about \$16 million a copy. The F-35 will cost about \$83 million a copy. If you adjust for inflation it is about 24 million a piece for the F-16 versus 83 for the F-35, but that has been the pace of intergenerational cost growth, and you can't sustain that over time. You have to do something to rein it in. And I think the changes that Secretary Gates announced in April, many of those changes appear to be moving in that direction. Not going ahead with DDG-1000 as a basic whole design for surface combatants, but instead DDG-51, which is a much smaller and presumably less expensive hull, relying more on Littoral Combat Ship for many missions rather than larger destroyers.

Chairman SPRATT. One last question for both of you and then I will let others have an opportunity.

Listening to the various forces that impinge upon the defense budgets and determine how much we spend and how we spend it remind you of what a complex determination it is, whether it is an adequate defense. Do you think it is helpful to speak of defense adequacy in terms of percentages of GDP? Three percent, four percent? Is that useful or misleading and unuseful.

Mr. GOLDBERG. I would say from our point of view it is probably not extremely useful. And I would say a better approach than saying well we can afford to spend three or four percent of our economy on defense would be more from the bottom up as to say what the QDR is attempting to do, we have yet to see what success they will have, is to ask what are the threats, what do we have in the inventory, and what do we need to buy to meet those threats? And whatever percentage that turns out to be I would rather build it up from the bottom than to say that we should flat line the defense budget at some percentage of GDP.

With all of the other pressures on the federal budget, I am sure you are aware, Mr. Chairman, health care and other entitlement programs, it is almost inevitable there is going to be a squeeze on defense, and so I think the better approach would probably be to figure out what do we need and how much would it cost, rather than starting off by saying we need to maintain this much top line.

Mr. DAGGETT. Yeah, my view is that talking about defense is four percent of GDP. It is perfectly reasonable to use that as a way of arguing that if we choose to do so we can afford it, that it is a measure of the impact of defense spending on the economy. And to say that it is four percent of GDP says that relative to what it has been in the past is less of a burden in that sense. So it is perfectly legitimate as a measure of the kind of economic burden of defense spending.

What it misses is the overall budget environment, and the budget environment has changed dramatically as well. Federal spending has stayed stable at about 20 percent of GDP going back the last 40 almost 50 years. What has happened is major entitlement programs have climbed dramatically as a share of GDP and as a share of the budget while defense and other discretionary programs have declined.

So you know, while it is reasonable to look at defense as a share of the economy you also need to look at defense as a share of the overall budget. If you want to increase the budget above 20 percent then there is room for a bigger increase in defense, but you need to take the budget picture into account as well.

And one other point. You know, ultimately Matt's point is the correct one. I mean, in defense the starting point has to be what do you want to accomplish in the international environment and what kind of military forces do you need to accomplish that? And within limited resources how can you best do that? And that is quite a part from the level of defense spending as a share of GDP.

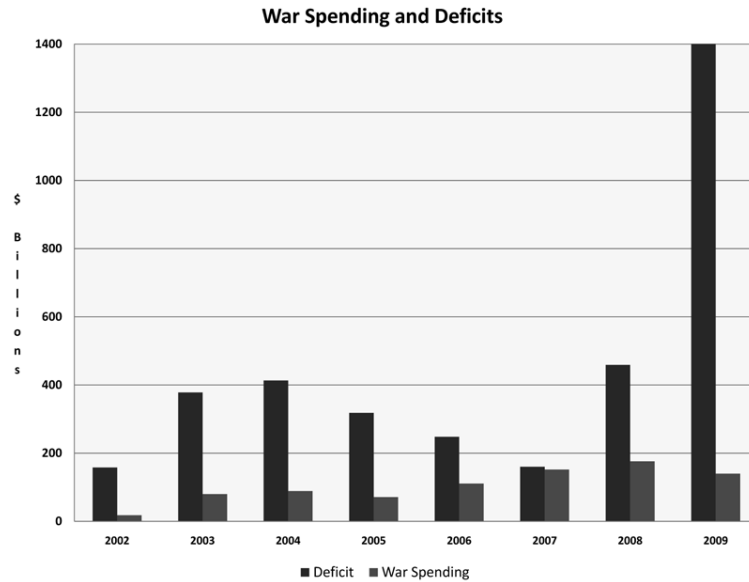
We need to be looking at what China is doing in military spending more than we need to be looking at what is happening to our spending as a share of GDP. And in dealing with China we also need to take account of the fact that within 40 years China is going to have as large a GDP as we do. They will be the largest economy in the world. So the way in which we address how China is evolving militarily has to take account of this dramatic change in relative financial circumstances over time as well.

Chairman SPRATT. Thank you both. Mr. Ryan.

Mr. RYAN. Thank you, Mr. Chairman. Mr. Goldberg, this probably is a best question for you. How much of operations in Iraq and Afghanistan contributed to the deficit this year?

Mr. GOLDBERG. The number aren't quite in, but it appears that operations in Iraq and Afghanistan ran about 155 billion in the year that we just completed in 2009.

Mr. RYAN. Can you bring up Chart 9?



Mr. RYAN. The point I guess behind my question is, what we are hearing more often these days is that, you know, if it weren't for the war we wouldn't have these big budget deficits. The blue graph shows you the war spending and the red shows you the deficits. So we are seeing that war spending, which peaked I think in 2008, is really actually quite a small fraction of our deficit.

Do we make a distinction as to what is deficit finance and what is not deficit finance when it comes to federal spending in a deficit climate?

Mr. GOLDBERG. At CBO we do not, and we are reluctant to do that because it is very difficult to say that this particular dollar that I am going to spend on defense, whether that is a dollar that I raised through taxes or whether that is a dollar for which I had in a float bond, so we prefer not to make that distinction.

Mr. RYAN. Yeah. So I think it is important to put these conversations in perspective as to their impact on our fiscal situation and our deficits.

Your missile defense line was very interesting to me, and I am not an armed services guy so you need to break it down for me. Looking at the decision that was made to withdraw our systems out of the Czech Republic and Poland, what is the cost difference between the current plan for missile defense under the various scenarios you described and the cost trajectory we were on with the land-based system? And what are the costs associated with discontinuing the land-based system? I assume there are wind down costs, there are storage, you know, costs and other things. What are those costs associated with this decision?

Mr. GOLDBERG. There are costs. All of the numbers are a little preliminary in that we don't really know the concept yet that the Administration is going to use, but I can give you a few of the numbers. Eliminating the sites in the Czech Republic and in Poland we

would save 1.5 billion, by not having the radar in the Czech Republic and the interceptors in Poland, 1.5 billion.

Chairman SPRATT. Is that with ten or over five or over—

Mr. GOLDBERG. That is the total cost over the ten years, 1.5 billion.

Mr. RYAN. Okay.

Mr. GOLDBERG. There were lost of small costs. The biggest element that you put back in is the cost for the ships, and the cost for the ships, as I have indicated, they are—

Mr. RYAN. It is 19- to 6 billion? You said the LCS type ships would be 6 billion, if we do new ships they would be about 19-?

Mr. GOLDBERG. Yes. If we do new Aegis destroyers they would be 19-, if we do new LCS specially modified for this mission it would about 6 billion.

The other option is to take existing ships and just convert them, upgrade them so that they could perform this mission, and that would be about 300 million in total for the nine ships. Two hundred million has already been requested for six ships.

Mr. RYAN. And is that assuming we don't replace those existing ships because we are changing their missions?

Mr. GOLDBERG. We would not replace them, that is correct.

Mr. RYAN. Okay.

Mr. GOLDBERG. That is assuming that they would be dedicated to this mission and therefore not be available for other missions.

Mr. RYAN. Are there termination costs associated with this? Any contract termination costs associated with this decision?

Mr. GOLDBERG. I am not aware of any. I believe the 1.5 billion that I gave you earlier was the complete—

Mr. RYAN. Is the complete cost?

Mr. GOLDBERG. Is the complete cost. There are a few other costs, and it is hard to answer this question, because the Navy was buying the standard missiles anyway, and they may continue to buy just as many standard missiles regardless of how this option plays out, so it is hard to say that we would buy more fewer standard missiles because they would probably be in the inventory anyway.

Mr. RYAN. Okay. So I am trying to get a sense of just how this technology is to be deployed and what its long-term costs are. So ten year we have got 1.5 billion savings for discontinuing the land-based system.

Mr. GOLDBERG. Correct.

Mr. RYAN. Depending on how we deploy from a sea base system—

Mr. GOLDBERG. Correct.

Mr. RYAN [continuing]. It is anywhere from 300 million up to 19 billion dollars?

Mr. GOLDBERG. Correct. Now the one other—

Mr. RYAN. Yeah.

Mr. GOLDBERG. If I may. The one other big cost that I can offer you, which we have estimated, would be for the land-based version. Because there are four phases of the Administration plan, some of which involve sea basing on the Aegis ships and some which involve land-based. So if I could talk about the land-based piece—

Mr. RYAN. Sure.

Mr. GOLDBERG [continuing]. Because I have some numbers. We estimate that to develop the land-based version of the SM-3, the standard missile for this purpose, would take 400 million in R&D, and then for every additional site it would be another 700 million. And so 400 to develop it and 700 million for site for land-based.

Mr. RYAN. Okay. And how many sites were being contemplated in the full build out?

Mr. GOLDBERG. What did we have? I think two is the current.

Mr. RYAN. Okay.

Mr. GOLDBERG. Two is the current number.

Mr. RYAN. All right. Mr. Daggett, I have got a question for you. Give us a sense of health care. You know, we focus so much on our domestic spending liabilities with respect to our entitlement programs on Medicare, Medicaid, you know, the demographics, the health inflation being what it is. Give us a sense of the crowd out of defense spending with respect to TRICARE. And I assume you have the same kind of fiscal pressures. We have seen these numbers before; I think you have testified on that.

Mr. DAGGETT. Yeah.

Mr. RYAN. Give us a sense of the crowd out with respect to the health care on legacy cost and DoD.

Mr. DAGGETT. In Fiscal Year 2010 budget total health care costs include costs in the operation and maintenance accounts for care of uniform personnel and their dependents through TRICARE. If you include military personnel and if you include accrual payments that DoD makes for future health care benefits for current employees it is about 45 billion dollars this year for health care costs.

Mr. RYAN. And that is a percentage of the overall DoD budget of what?

Mr. DAGGETT. Within of about \$534 billion, so it is about nine percent of the budget.

Mr. RYAN. Okay.

Mr. DAGGETT. The projection is that that will increase within five years to about \$64 billion. So you know, that is in constant 2010 dollars. So it is about five percent per year growth in line with growth of health care costs in the overall civilian sector. So another, you know, almost \$20 billion of additional expenses just in a five-year period.

So it is, yes, health care costs are a major factor that DoD is concerned about. It is a major factor that is driving up the cost of operation and maintenance by 2.7 percent per year, and it is a real matter of concern for DoD.

Mr. RYAN. All right, thank you.

Chairman SPRATT. Mr. Doggett.

Mr. DOGGETT. Thank you both for your testimony. My questions concern Afghanistan, and I will address them to Mr. Daggett.

During the long deceit and denial days of the Bush, Cheney, Rumsfeld's Administration it was almost impossible to determine or estimate the cost of our go it alone invasion of Iraq. It seemed as if they had a grand don't ask don't tell policy whenever we sought to get the facts about what American taxpayers were being asked to commit to there.

As some people now are calling for expanding the number of young Americans who will be asked to face the harsh realities of

Afghanistan, I want to be sure that we replace deceit and denial and don't ask don't tell with as accurate of facts as we possibly can, and certainly so that this Committee can fulfill its responsibilities in budgeting.

First let me ask Mr. Daggett. Just as it refused to break out the cost of Iraq, the pentagon, as I understand the way they present their figures on the cost of Afghanistan, they have intermingled them with the cost of operations in Philippines and the Horn of Africa have they not?

Mr. DAGGETT. Yeah, that is true. From the beginning DoD has identified costs of what they call Operation Enduring Freedom.

Mr. DOGGETT. Yes, sir.

Mr. DAGGETT. And that includes Afghanistan and——

Mr. DOGGETT. Well whether or not that is an appropriate label for what they are doing it certainly is possible if they want to provide the American people with the information to break out separately the cost for Afghanistan.

Mr. DAGGETT. Yes, absolutely.

Mr. DOGGETT. And let me focus your attention on the specific cost as best you can determine of what we are committing to each time we send one additional service member to Afghanistan, is it correct that the best estimate we have is one soldier, one year in Afghanistan, one million American dollars?

Mr. DAGGETT. That is about right.

Mr. DOGGETT. All right.

Mr. DAGGETT. My colleague, Amy Belasco, has actually done numbers on this extensively, as has CBO by the way.

Mr. DOGGETT. And from your review of the literature, and I understand that is all you have to rely on, is it also correct that the cost of maintaining one Afghan soldier one year in Afghanistan is about \$12,000?

Mr. DAGGETT. We have seen that just from press accounts. That that is a DoD estimate, yes.

Mr. DOGGETT. Twelve thousand versus one million.

Mr. DAGGETT. Yes, sir.

Mr. DOGGETT. Let me ask you. With reference to one of the problems we had with the Bush, Cheney, Rumsfeld camouflage of the figures from the American people was that they would announce one set of troop figures when in fact they were actually committing us to much larger set. And I was troubled yesterday to see on the front page of the Washington Post, support troops willing U.S. force in Afghanistan, that while we had had an announcement that we were expanding the number of troops there in the spring by 21,000. In fact when you count the support troops that are being added there, 21 becomes the new 34, and we actually have 34,000 more troops going there. Is that correct?

Mr. DAGGETT. Yes, sir.

Mr. DOGGETT. And in calculating the cost, a million dollars, one soldier, one year you have to include the support troops to give people an accurate indication don't you?

Mr. DAGGETT. Yes, right.

Mr. DOGGETT. Now anyone who is advocating, again, asking you from your review of the literature, because I know you follow this, are you aware of anyone who is advocating more troops for Afghan-

istan now that has suggested a time line that they can stay for less than a decade? Have you heard of anyone out there?

Mr. DAGGETT. No, I have not heard any particular time line.

Mr. DOGGETT. Okay. So when we talk about one million per soldier per year we are not just talking about one year, and certainly in your estimates you don't look to just one year do you?

Mr. DAGGETT. No, we don't.

Mr. DOGGETT. Let me ask you also about what, and it is a strange term to me, but it is the term I heard from the pentagon, the so-called monthly burn rate. How much money is being burned each month.

Mr. DAGGETT. Right.

Mr. DOGGETT. Is the monthly burn rate in Afghanistan now without all these additional troops about 3.6 billion per month?

Mr. DAGGETT. Through the first seven months of Fiscal Year 2009 the average monthly burn rate is \$3.6 billion per month, yes.

Mr. DOGGETT. And if we deploy an additional 50,000 troops, including support personnel to Afghanistan, will the burn rate in Afghanistan be equal or about equal to the burn rate we currently have in Iraq?

Mr. DAGGETT. Yeah, almost precisely. The \$3.6 billion per month supports an average troop level of about 51,000 in Afghanistan. If you added another 50,000 to that that would double it which would bring the burn rate to 7.2 billion per month. The burn rate now in Iraq is about 7.3 billion per month.

Mr. DOGGETT. And you referenced your colleague, Amy Belasco, who has helped this Committee in the past in her objective studies. Has she analyzed the Defense Finance and Accounting data, the DFAS data to show that actually even what the Washington Post reported yesterday understates the true cost of the war in Afghanistan because there are many other support troops that are actually, when you look at those records, are actually supporting Afghanistan?

Mr. DAGGETT. Well it understates the number of troops, it doesn't necessarily revise the cost figures.

Mr. DOGGETT. I see.

Mr. DAGGETT. The cost figures are just supporting a much larger number of support troops in the region.

Mr. DOGGETT. That may not actually be in country.

Mr. DAGGETT. Right, right.

Mr. DOGGETT. Well thank you very much. Thank you, Mr. Chairman. This is a tremendous cost in addition of course to the cost in blood and sacrifice the military families that we must consider as we evaluate our alternatives in Afghanistan.

Chairman SPRATT. Thank you, Mr. Doggett. Ms. Lummis.

Ms. LUMMIS. Thank you, Mr. Chairman.

Mr. Daggett, President Obama has established this joint understanding with Russia to work towards further reductions in our strategic nuclear arms by renewing START. This is a concern to me because F.E. Warren Air Force Base is in my district of Wyoming and we oversee the Nation's ICBM force. And I know that there are strategic factors that play into a nuclear force reduction decision. What can you tell me about the comparative cost per warhead de-

livery vehicle in our ICBM forces as opposed to a submarine launched missile bomber?

Mr. DAGGETT. We did a study last spring for Senator Conrad that addressed specifically that question. And what we did was look at not only the missile force, Minuteman III ICBMs versus Trident 2 submarine launched missiles, but also looked at the bomber force, and what we found was that the cost per warhead depends on warhead loadings, and they can be quite variable. So that is the big variable factor in this.

Ms. LUMMIS. And excuse me for interrupting, but I am really more interested in the delivery system.

Mr. DAGGETT. Yeah.

Ms. LUMMIS. The delivery vehicle rather than the warheads, because I know you can load multiple warheads on one delivery vehicle.

Mr. DAGGETT. Yes, you can. Well what we found was that each Minuteman III missile costs about \$2.9 million per year in acquisition and operating costs. Each Trident 2 missile costs about \$10.5 million per year, but again, if you look at warhead costs that evens out because the Tridents deploy somewhat more warheads than the Minuteman do.

Ms. LUMMIS. Well and I recognize the role of bombers and submarines in our nuclear posture, but the ICBM force possesses unique characteristics, the land deterrents and stability to ourselves and other nuclear powers around the world. The silo locations are publicly known, yet because they are so dispersed they make a preemptive or disarming attack almost impossible in today's world. So our ICBM forces contributed to global stability for decades, and I have been visiting with Air Force officials and they confirm that they remain vital to our national security.

And so I just wanted to point out that as between the two warhead delivery platforms that we get a lot of bang for our buck without, you know, butchering that term.

My next question, Mr. Daggett is also for you. If you look at the larger defense budget. Your testimony mentioned that the Administration's current defense plan differs significantly from the needs articulated by the Joint Chiefs of Staff last December in their own defense plan. For 2010 alone the Obama Administration has requested a 2.5 percent increase in the defense funding while the Joint Chiefs called for a 12 percent increase.

Do you know what underlying defense policy differences account for this discrepancy, 2.5 versus 12 percent?

Mr. DAGGETT. No, I didn't do those numbers. I did not look at specifically the difference between those earlier plans.

I do know that there was some discussion early in the year of a request that DoD presented to the Office of Management and Budget for I think it was a \$57 billion increase in the top line, and that may be what that is referring to. That top line increase though was in large part involved taking into the base budget costs that earlier had been in the supplementals. About \$30 billion of that 57 billion additional amount, as I understand it, was simply to take in house into the base budget costs of Iraq and Afghanistan, and OMB did not sign off on that. So there was a much smaller real additional increase in the top line.

Some of the proposals did involve increases in Air Force and Navy acquisition accounts. Biggest increases in Navy acquisition accounts on the order of \$5-\$6 billion a year I think. I don't know precisely what those changes were for.

Ms. LUMMIS. Okay, thank you. Mr. Goldberg, you mentioned in your testimony that the Obama Administration has not submitted the customary FYDP for 2010?

Mr. GOLDBERG. Yes.

Ms. LUMMIS. And that you had to rely on press releases and briefing papers in addition to the 2010 budget request by the last Administration's FYDP, so I have a two pronged question.

Has the Administration provided justification for not submitting a FYDP? And has not having a FYDP posed extra challenges to your agency in formulating long-term projections?

Mr. GOLDBERG. Yes, ma'am. The Administration justified not submitting the FYDP because it was a new Administration. They came in within a month or two of the inauguration they had to present a budget and there just wasn't enough time to present more detail than beyond the 2010 single budget year.

Has it posed challenges to us? Absolutely. Because ordinarily we have five years or six years of at least a plan. There were out year funding numbers in there that of course won't be enacted until future sessions of Congress. So they are placed in their plan, they are not actual commitments by anyone, but nonetheless it gives us a good idea where the Department thinks they are going, where they would like to go. And so our projection was much more difficult this year by not having that.

If I could also add, there is one other thing that was missing, is called the Selected Acquisition Reports, the SAR, the SARs, which are produced periodically, but the full reports come out at the end of every calendar year, every December. December of '07 was the last time the Department produced SARs. There were no December '08 SARs.

What they do is they give cost schedule technical challenges basically every major acquisition program. There would be one for the FCS, there would be one for the joint strike fighter, et cetera at that level, and having that information every year refreshes our knowledge of those particular programs, and that again was not submitted this year and has been a hindrance.

Ms. LUMMIS. So when you haven't had SARs for that long how do you make those projections? And what is the justification for going since '07 without SARs?

Mr. GOLDBERG. Actually, I would suggest, if I could defer that question for your session next week with the DoD comptroller. I presume it would be the same justification. So many things were changed in the April announcements by Secretary Gates and the subsequent budget submissions, a lot of programs had to recalibrate and that information is just not yet reflected in a fresh set of SARs.

Ms. LUMMIS. Okay. I know that I am asking the wrong person, but the SARs weren't even coming from the previous Administration it sounds like. Excuse me, Mr. Chairman, my time is up.

Chairman SPRATT. Just for clarification. Not having a FYDP in transition year is pretty standard procedure.

Ms. LUMMIS. Okay.

Chairman SPRATT. 2001 the Bush Administration didn't have one. And frankly Cheney admitted in late June that one reason he dragged his feet in presenting a FYDP, a budget, to pull up budget for that year the President asked him to do so until he could get his tax cuts passed.

Ms. LUMMIS. Until he could get his tax cuts?

Chairman SPRATT. Tax cuts passed.

Ms. LUMMIS. Okay.

Chairman SPRATT. Bush didn't have one in '01, Clinton didn't have one in '93. It is not uncommon, because they would be adopting somebody else's budget. They would rather put in place their own full up budget and that is part of the reason for the delay.

Ms. LUMMIS. Okay. Thank you, Mr. Chairman. And why would the SARs, these—

Chairman SPRATT. Selected Acquisition Reports?

Ms. LUMMIS. Yeah. Why would they not come in '08 and '09? I mean those would have been prepared by the previous Administration.

Chairman SPRATT. Well SARs should come every year.

Mr. GOLDBERG. If I could, Mr. Chairman. The SARs would be as of December '08, but would be released perhaps a month or two later and concurrent with the budget and they were not this year.

Chairman SPRATT. Well they come annually.

Mr. GOLDBERG. Yeah, they are quarterly SARs, but the ones that are meaningful, the annual ones, and their information as of December and they might typically be released a month or two later. So the December '08 SAR would have been released early this calendar year. Should have been and wasn't.

Ms. LUMMIS. So would that have been held back by this Administration, or prepared by the last Administration and then this Administration said whoa up, we don't know if we agree with that? Is that—

Mr. GOLDBERG. I believe that is right. I believe that the current DoD under secretary comptroller—

Chairman SPRATT. Well I tell you what, we are going to have Mr. Hale as a witness, and you can—

Ms. LUMMIS. Sorry, Mr. Chairman.

Mr. GOLDBERG. I believe it is Mr. Hale's—

Ms. LUMMIS. Okay. Thank you.

Mr. GOLDBERG [continuing]. Province there.

Chairman SPRATT. Mr. Etheridge.

Mr. ETHERIDGE. Thank you, Mr. Chairman, and let me thank you for this hearing. Let me thank both of you gentlemen for being here today.

My question is going to be a little different because I have a privilege of representing two very active bases. Fort Bragg in North Carolina and the Pope Air Force Base that is adjacent that does the lift.

So my questions are this, because they are critical areas as it relates to what they do, wherever they may be sent. And in both of your testimonies you list factors that are driving up the cost of our national defense. In each case the majority of the factors are related to increase in weapons cost. Mr. Daggett had four of six, I be-

lieve that is correct, and Dr. Goldberg had three of four. And as I said, as it relates to the areas I represent, as well as a significant number of guard and reservists who now find themselves serving in various places around the world, I am very concerned about being able to meet the needs of those men and women when we ask them to go that they have the resources.

So my question is, what constraints will our defense budget face as we thrive to continue to meet the obligation of those who are protecting our Nation? You talked about the increase in costs, but what are those constraints?

And second, let me move to the second part of that, and hopefully both of you can take a shot at that. The BRAC process has also contributed to some of the increased costs in operation and support, and there continues to be a significant need tied to those BRAC operations, specifically at Fort Bragg and other places where you have major movements into housing, schools, infrastructure needs.

And my question is what do you think the long-term impact of BRAC will be on the defense budget, and how do we make sure that sufficient funds are there as we are looking to increasing costs as these bases are charged like Fort Bragg to meet their ever increasing roles and responsibilities in our national defense? Whoever wants to start first.

Mr. GOLDBERG. If I could respond to you first, Mr. Etheridge.

First thing about the constraints on our personnel, I am not speaking for the Defense Department, but what we have all heard is that it is a big concern for them. And one of the concerns is dwell time so that the soldiers coming back to places like Fort Bragg have a year at home, and another concern is the stop loss, extending folks deployments when their contracts are over. And in some statements, again, I don't represent Secretary Gates of course, but in some statements he made in April, Secretary Gates expressed concern about a desire to end stop loss and a desire to get out of dwell time, and for that reason he also talked about temporarily increasing the Army's in-strength by another 22,000, I believe, 22,000 people in Fiscal Years 2010, 2011, and 2012.

So the Secretary's statement was that in Fiscal 2010 that money was supposed to be taken out, he wasn't asking for any additional funding to support those folks, and it remains to be seen how that would be funded in 2011 and 2012.

So an issue that will then come before the Congress is in order to keep those 22,000 troops in the Army for the purposes of fully populating units so that the deployment soldiers get dwell time and to avoid stop loss. The trade off we face is are we willing to fund those 22,000 troops? I think that is one of the biggest issues.

Mr. ETHERIDGE. Yeah. Mr. Daggett?

Mr. DAGGETT. Yeah, let me echo that on personnel. The big question on personnel is just how the pace of operations is affecting individuals and their families. And a lot of what DoD has been doing has been aimed at ameliorating that problem both in the short term and the long term. The increases in the size of the Army and the Marine Corps in particular were designed to fill out deployable units so that it would be less disruptive on other units when you deploy one unit forward. They have actually found it is more difficult even than they thought.

So the most recent decision in April was to reduce the number of combat brigades in the active duty force from 48 down to 45 so they could all be fully manned and/or be ready for deployment. That is a difficult problem.

Mr. ETHERIDGE. But in that whole process we are actually using our guard and reservists at a much more rapid rate and they are becoming part of that same force.

Mr. DAGGETT. Yeah. Well they are now becoming part of the rotation base, yes.

Mr. ETHERIDGE. Yeah.

Mr. DAGGETT. And to the extent that we maintain the current level of deployments abroad in Iraq and Afghanistan it is going to continue to be a strain on the reserves just because the active duty units can't do it all.

So I think you are right, that strain can only be ameliorated in the long term by reducing the forward deployment, but reducing deployments to Iraq and Afghanistan. We are in process in that in Iraq. It will be offset to some degree by increases presumably in Afghanistan if there is a decision to go in that direction, but I don't think anybody foresees deployments in Afghanistan equaling the level in Iraq. So the situation should get somewhat better over time, but I mean, that is the real pressing issue for DoD.

What we have seen lately by the way is that you know DoD is always tracking very closely retention rates and accession rates of new personnel, and they have both been doing pretty well lately. Now part of that is the economy. When the economy is bad being in the military and signing up looks better. But I think part of it is also that people are looking—military families on retention rates in particular—military families are looking ahead to things easing up a bit. If it doesn't, if it gets worse then we could face a real crunch, yeah. And we look very closely at that too. It has been a real matter concern since 2005.

Let me say that the Army by the way when we looked at the retention recruitment rates in 2005 we were all very concerned that the Army was going to have a bad problem with it, and they took a number of steps to try to handle it, including you know, accelerating some changes in the force structure, including dramatic increases in re-enlistment bonuses and things of that sort, and to some degree reducing requirements for new personnel. And there was a price to pay, and that the quality of personnel declined to some extent, but they ended up meeting their target.

So the Army did its thing, and you know, by every account deserves immense credit for the way in which they were able to do it. But can they manage that over the long term? It is still a pressing concern, yeah.

You commented on base realignment and closure as well. Let me say one thing about that. You know base realignment and closure funding are provided out of a separate account in the military construction budget. So presumably that is a given amount, and it is supposed to be provided on a regular basis to carry on the activities that are identified with base closure.

This last round of base closures had a very high investment cost associated with it, and part of it was it was done not just for reasons of efficiency, but also for security reasons and things of that

sort. So the cost associated with this round make me question whether in the long run the savings will offset what the investments had been.

In the past the evidence is pretty clear that in the very long run at least, we don't have precise measures, but the ultimate operating costs have exceeded the initial investment costs, so we have gained something by base closure rounds. This last round was relatively expensive though. I am not sure what the outcome of that will be.

Mr. ETHERIDGE. And we are not through yet. Thank you, Mr. Chairman.

Chairman SPRATT. Mr. Edwards.

Mr. EDWARDS. Thank you, Mr. Chairman.

Let me first make an observation as we are talking about defense and budgeting. A number of my Republican colleagues in the House back in 2001 and through the Bush Administration were the architects, some on this Committee, the architects have frankly taken the largest surplus in American history and turned it into the largest deficit in American history.

Then with the new Democratic President I have heard a lot of focus on reducing the deficit, and yet some of these same Republican colleagues have criticized the democratic health care proposals because they are too expensive and also because they reduced spending for Medicare.

Mr. Ryan said earlier that it is important to put things in perspective in talking about the cost to the Iraq and Afghanistan war. It is a fair comment to make.

I would just add to that perspective that that \$155 billion a year, as I understand it, is almost twice the annual cost of the health care plan passed out of Senate Committee yesterday intending to provide health care for the vast majority of Americans, so I would put that perspective to it.

I think what surprises me is not that a number of our Republican colleagues would support General McCrystal's increase in troops and Afghanistan, ultimately I believe that defense decisions must be made based on the importance of the mission, and I agree with Mr. Ryan that our national defense is our number one priority.

What surprises me though is that the Republicans have raised questions about million dollar expenditures here and there, seemed to have not asked too many questions. I certainly haven't read about it, about the cost of General McCrystal's proposal for increasing the number of troops in Afghanistan by 40,000. That seems completely inconsistent with their new found focus on trying to reduce the deficit that in my opinion many of them helped create with their irresponsible budgets of tax cuts during a time of war and defense build up.

I would like to go to you, Dr. Goldberg, on this issue and follow up on some of the questions that Mr. Doggett was asking of Mr. Daggett.

Has the CBO analyzed what the additional costs would be in defense spending of following General McCrystal's proposals of adding 40,000 troops to Afghanistan?

Mr. GOLDBERG. We have not been requested to do that analysis.

Mr. EDWARDS. You have not been requested. Now, Mr. Chairman, I hope perhaps as Budget Committee Chairman and perhaps in conjunction with Mr. Ryan that that would be a fact basis that I think would be very, very important for the Congress to take a look at.

So have you personally analyzed in any way some of the other estimates that for every soldier or service men or woman we have in Afghanistan that it costs about a million dollars?

Mr. GOLDBERG. What I would have to say is that since most of our focus has been on Iraq, since Iraq has been the bigger operation until now, we have not distinguished the cost per service-member between the two theaters. If we were to receive a request to look specifically at Afghanistan we would attempt to make these distinctions and find it.

Mr. EDWARDS. Okay. Okay. Then Mr. Daggett, I may go to you, and I hope we will put in a request to CBO to analyze it. While it is not necessarily the final determining factor on whether we add troops in Afghanistan, for anyone who is serious about the deficit certainly it is a factor we ought to consider.

Mr. Daggett, you said that if we doubled the number of troops in Afghanistan that would come to about \$7.2 billion a month; is that correct?

Mr. DAGGETT. That is a good back of the envelope calculation, nothing more than that.

Mr. EDWARDS. So that is about \$86.4 billion a year according to my envelope math here. To put that in perspective, I believe that is more than the proposed cost of the Senate health care plan that passed out of the Senate Finance Committee yesterday.

Let me ask you this. If you estimate \$1 million per service man or woman in Afghanistan, I think you referenced another person's study to that, and if you had 68,000 troops today and added another 40,000 that would be say approximately 108,000 troops. If you used \$1 million per service man or woman that would actually be \$108 billion a year.

Mr. DAGGETT. Right.

Mr. EDWARDS. Could you explain the difference between the 86 billion the 108 billion dollars?

Mr. DAGGETT. Fiscal Year 2009 versus Fiscal Year 2010. The burn rate of 3.6 billion per month is the Fiscal Year 2009 average through July. We have just passed the Fiscal Year 2010 budget which includes about—or we are just in the process of passing it—includes about \$130 billion for contingency operations, of which about \$68 billion is for Iraq in 2010. That is for a troop level of about 68,000. So \$1 million per troop.

So if you use that as the basis for saying if you add 40,000 troops you would be up to 108,000. If the cost per troop remains the same I am not sure it is safe to assume that. You have got a lot of the infrastructure already in place. It could go over that.

Mr. EDWARDS. But it could be over \$1 billion or trillion dollars over a decade. Thank you.

Mr. DAGGETT. Sure, I would say that is the upper limit.

Mr. EDWARDS. Okay, thank you, Mr. Daggett. Thank you, Mr. Chairman.

Chairman SPRATT. Mr. Scott.

Mr. SCOTT. Thank you, Mr. Daggett, I would just follow up on that. You are using the million dollars per troop and that is what you call the burn rate. What portion of the cost of the troop is not spent this year? That is to say you have got disability, you have got mental health, you have got equipment to be replaced and everything else, what portion of the total kind of life cycle costs would be added to the million a year?

Mr. DAGGETT. Your point is a good one. The costs that we talk about are the incremental costs of the operation. Incremental now being broadly defined, but it is still the cost of deploying a troop to Afghanistan over and above the cost of keeping the same service member in Fort Hood or whatever. And that is a limited part of the total cost of the service member over the total whole, you know, lifetime of a service member. So there are follow on costs for Veterans Administration benefits and so on.

Some of those are incorporated. Because a service member pay and benefits include contributions to the military retirement fund for retirement costs and for these days concurrent receipt of military retired pay and VA disability benefits, right? So some of those long-term costs are included in the current pay of personnel. We do it on an accrual basis. We pay now. The actuarially determined future costs of current personnel, right? But to some extent they are not captured. The Veterans Administration budget, which provides medical care for veterans after their service is completed, is not covered by that, and that will be an additional expense. I don't have good numbers on that.

Mr. SCOTT. I mean is it half, one-tenth? I mean, any idea?

Mr. DAGGETT. Well the VA budget this year is about \$80 billion compared to a defense budget of what, 530 billion, so that is what about not 20 percent, 16 percent, something like that, 16 percent of the budget. That may be a fair calculation.

Mr. SCOTT. And what about equipment reconstitution?

Mr. DAGGETT. Yeah.

Mr. SCOTT. They are wearing out equipment?

Mr. DAGGETT. Yeah. The figure \$68 billion is the estimated cost in Fiscal Year 2010. That includes funding for equipment, including for reset and other purposes. That does include an investment piece of it, not just the operating costs.

Mr. SCOTT. In terms of cost per troop the gentleman from Texas, Mr. Doggett, mentioned the cost for an Afghanistan troop being essentially de minimis compared to an American troop.

Mr. DAGGETT. Yeah.

Mr. SCOTT. And talked about other support staff. What is the economic impact on contracting out rather than using troops? I know when we used contracting out when I was in the National Guard you thought you were talking about KP so you didn't have to peel potatoes.

Mr. DAGGETT. Right.

Mr. SCOTT. But they are actually doing what are essentially military functions now. What is the budget impact of contracting out, particularly when you are contracting out to sole source providers without much limitation on what they are charging?

Mr. DAGGETT. Yeah. There are as many contractors in Afghanistan working for the United States now as there are service members or more. It is part of the cost.

When we talk of the cost of \$1 million per troop that incorporates the cost of support activities, including contractors who do food services and transportation and to some degree security and so on. Although many of them receive lower pay than military personnel members.

Mr. SCOTT. And some receive higher pay.

Mr. DAGGETT. A few do for security. When it is a U.S. personnel for security activities and things of that sort, yes, but actually the bulk of most contractors in Afghanistan are third-country nationals, are neither U.S. nor Afghans, they are from places like the Philippines or the Persian Gulf countries and so on.

You know, the net effect of contracting out service activities is a matter of some debate, because it is been a very high cost. The premise is it is cheaper to contract out on a temporary basis even if you pay a premium for it than it is to maintain in the force the permanent structure that would be necessary to carry out those operations.

Mr. SCOTT. Which goes back to the first question I asked.

Mr. DAGGETT. Yeah. Which is how much more are the costs? Yeah.

Mr. SCOTT. When you said asymmetrical challenge, were you talking about the use of 100,000 troops in Afghanistan to chase after 100 Al Qaeda members?

Mr. DAGGETT. Irregular warfare is one means of asymmetric conflict, yes. You know, what Hezbollah does in Israel is an example of asymmetric warfare. They are using less technologically sophisticated means than the Israelis have, but to pose a real military challenge. So I think it is incorporated, yeah. And any future foe, Iran, would use all of the means at their disposal in a conflict with the United States, including those kinds of irregular activities; use of terrorist attacks, yes.

Chairman SPRATT. Are there any other questions? Mr. Yarmuth.

Mr. YARMUTH. Thank you, Mr. Chairman. I think we are obsessed with this line of questioning, but I want to pursue it just a little bit further.

Apparently looking at the data, the actual O&M for an individual, an American troop is something like a little over \$100,000 a year; is that correct?

Mr. DAGGETT. A pay plus directly related O&M.

Mr. YARMUTH. Benefits.

Mr. DAGGETT. It is actually more like 120 or 130,000.

Mr. YARMUTH. Okay, 120-, 130-. And then we are talking about \$1 million cost per year in the field.

Mr. DAGGETT. Right.

Mr. YARMUTH. We have kind of talked around it. What are the components that take 120,000 person to a million dollar person?

Mr. DAGGETT. If you want to take a cut at that I would be happy to have you do it, but it is hard to get there admittedly.

My colleague, Amy Belasco, in particular has taken a very close look at that, and it incorporates acquisition, it incorporates investment accounts. We are buying very large numbers of MRAPs, in-

vesting a lot in IED defense and things of that sort, large acquisition of new systems for UAVs for intelligence and reconnaissance activities and things of that sort; all of that is included.

The operating costs include though, you know, the cost of deploying forces in a war zone that is very difficult to get to, so it has very high transportation costs, and of hiring contractors who are expensive as well to carry out support activities.

That said, you know, if you compare costs in Iraq and Afghanistan recently to costs of earlier operations in Bosnia and Kosovo or Haiti or Somalia before there, it is just vastly more expensive now than it has been in the past.

Mr. YARMUTH. Uh-huh.

Mr. DAGGETT. It has jumped up not quite expediently, but almost. And I think that is to be explained. That is a matter of ongoing discussion, yeah.

Mr. YARMUTH. So is there ever a point in which there is an economy of scale? You know, if there were a million troops would it still be \$1 million a person?

Mr. DAGGETT. No, there has to be an economy of scale, and I think if there is an increase of 40,000 troops in Afghanistan that would begin to show up. It costs a certain amount just to have the infrastructure—support infrastructure established in the region, build the bases, have the transport facilities elsewhere. It is not just in Afghanistan, it is elsewhere, and we have made a big investment already in doing that.

Mr. YARMUTH. Dr. Goldberg, would you want to comment on that?

Mr. GOLDBERG. I could just amplify, I don't fundamentally disagree with anything that Steve has said. But when you think about the O&M costs per soldier in the theater, which I think was the thrust of your question, there is transportation to and from the theater, there is all the fuel, there is—you know we drive tanks—we don't have tanks there, but you know we drive armored vehicles many more times the mileage in theater than we would in home station. And not only that, but the conditions are much worse; the sand. And we fly helicopters a lot more than we would during peacetime. There is the cost for providing fuel, water, food, a lot of which is shipped in. The transportation is contractors who do that kind of work. And then there is a lot of costs when the equipment gets sent back home and it has been beaten up from all that use and it has to go to the depots and get refurbished. That is also an O&M funded activity. It is really a lot of things.

Mr. YARMUTH. So it really doesn't matter where that troop comes from, if it is a new enlistee, new trainee going to Afghanistan, Iraq, or shifted from another theater, it is still going to be the same essential cost.

Mr. GOLDBERG. The cost of the soldier is actually the smaller part of it.

Mr. YARMUTH. Uh-huh.

Mr. GOLDBERG. And in fact the basis salaries are already in the regular budget. The only part that you would see, formally is supplemental and what is called the OCO, the Overseas Contingency Operation, explicit budget would be the special pays for serving in the combat theater and the activation costs for reservists would

otherwise be home. The base pay is already provided. So all you are seeing in the contingency costs are the extra pays, but you are seeing this huge chunk of operations and maintenance costs for these types of things we have been describing, including sending equipment back home for up to a two-year lag process to repair it or replenish it.

Mr. YARMUTH. I am going to try to ask a quick question with the 40 seconds, you may not be able to get at this.

But with the projected increase we have experienced already, the increase in health care cost for military back here and so forth and the projected increase, the \$64 billion you said in another five years, if we adopt health care reform, have you taken a look at the health care reform proposals to see if in fact they are successful in bending the health care cost curve that it could have a beneficial impact, a positive impact on military health care expenditures?

Mr. GOLDBERG. It could, but it is not automatic. If the Chairman would let go over a minute or two I would like to answer.

You could look at the supply side, the providers of health care and their incentives and you can look at the demand side, how much care people demand. One of the big initiatives on the supply side is what if you had health information technology, electronic medical records? DoD already has health information technologies. It is probably not as good as what the VA has, but the problem is that for that to really work and save costs it has to be interoperable nationwide.

So you have to realize that a lot of service members get part of their care through TRICARE, a retired service member will get part of the care through TRICARE and part through the private plan provided by his or her civilian provider. Can they exchange data electronically? If that can happen that will help bend the curve. If not it is much harder. And this is a problem that is endemic to big health care reform for the whole country as well, not just having electronic records, but making it interoperable so one provider can view the other.

On the demand side the issue there is giving us as consumers incentives to economize on our health care. Not to go to the doctor every time for a minor problem that maybe would get better on its own. It has been difficult to DoD to manage. And one reason the TRICARE costs have grown so rapidly, as Steve pointed out, is that many of the fees that the military beneficiaries retires pay have been frozen. For three years in a row DoD requested fee increases that the Congress shot down. It is very hard to get folks to control utilization when they don't face co-payments.

Chairman SPRATT. To our two witnesses, Mr. Daggett, Mr. Goldberg, thank you very much in deed for excellent presentations and for your painstaking replies to everyone's questions. We very much appreciate it and we will be calling upon you again in the forthcoming future I am sure as these numbers develop.

Mr. Ryan, do you have anything?

Thank you again, and this adjourns the hearing.

[Questions submitted by Mr. Aderholt and their responses follow:]

RESPONSES TO CONGRESSMAN ADERHOLT'S QUESTIONS
FOR THE RECORD FROM MR. GOLDBERG

QUESTION

1. Why, in your view, do the costs of weapon systems nearly always outpace the estimates for them? What are the major factors that contribute to that pattern?

RESPONSE

One factor in cost growth is that the system's requirements are not yet locked down at the time the initial procurement estimate is made. So-called "requirements creep" can lead to costs that increase faster than the program office's projections. In turn, additional requirements may lead to increases in volume or weight that are difficult to accommodate in a platform's initial design. The classic example of weight growth and its consequences occurs in fighter aircraft, necessitating either: (a) a degradation in performance characteristics such as range or maximum speed, (b) larger (more expensive) engines to compensate for the higher weight, or (c) a systems engineering effort to moderate the increase in weight.

QUESTIONS

2. In your testimony, you discuss the costs of the Administration's new plan for ground-based missile defense systems in Eastern Europe? How much does this new plan cost compared to the plan proposed by the Bush Administration?

3. We have to either build new ships or reassign ships from current, important missions in order for them to be stationed as missile defense ships in this region. What would be the cost of those ships and the personnel who man them?

RESPONSES

Combined response to questions 2 and 3:

In April 2009, Secretary of Defense Gates announced plans to freeze the current number of ground-based interceptors in Alaska as part of the ground-based mid-course missile-defense (GMD) system that is intended to defend the United States against limited ballistic missile attacks from North Korea or Iran. The plan would continue funding research and development to improve the nation's ability to defend against long-range ballistic missiles. Secretary Gates also announced plans to upgrade six U.S. Navy Aegis warships to perform the ballistic missile defense mission at a total cost of \$200 million. Moreover, on September 17, 2009, President Obama announced his cancellation of the previous Administration's plans to field a high-resolution tracking radar in the Czech Republic and to deploy 10 ground-based interceptor missiles in permanent silos in Poland. In its place, the President proposed a four-phase plan. Phase One would rely on Block IA of the SM-3 missile, which would be deployed on existing Aegis warships; Phase One would also base an AN/TPY-2 radar in Europe to provide early detection and tracking of ballistic missiles if launched toward the United States. Phase Two would entail both sea- and land-based deployment of a more-capable Block IB version of the SM-3 missile. Phases Three and Four would involve Block IIA and Block IIB missiles that are still under development.

The budget implications of the new plan for missile defense in Europe are the net sum of the costs avoided by not fielding the original system and the costs incurred by fielding the SM-3 based defenses instead. Note that cost estimates are preliminary because the Administration has not yet fully formulated and announced its new plan.

CBO estimates that about \$1.5 billion in costs would be avoided by not fielding two-stage interceptors in Poland and by not fielding the European Midcourse Radar in the Czech Republic.

The costs associated with fielding SM-3 based defenses in Europe would depend on how the plan was implemented. The biggest variable in the cost is whether or not new ships would be purchased to operate at fixed stations in Europe. Maintaining continuous coverage in three locations would require a total of nine ships (for each ship deployed, another would be undergoing maintenance and a third would be in use for training). If the Navy were to procure nine Arleigh Burke-class destroyers for the mission, the total cost would be about \$19 billion. However, it could be possible to perform that mission with less costly ships. For example, littoral combat ships cost about \$560 million each; a specially developed Aegis module consisting of a version of the SPY-1 radar and vertical launch system cells would add about \$90 million per ship, CBO estimates. The total cost for nine such ships would be about \$6 billion.

Rather than building new ships dedicated to the missile defense mission, and consistent with the Secretary of Defense's announcement in April 2009, the Navy could upgrade existing warships (or proposed warships that would have been built to perform other missions) to provide missile defense. The fiscal year 2010 request for \$200 million to convert six warships may be viewed as a first installment in pursuing the latter approach; the total cost for nine ships would be about \$300 million. In that case, however, the Navy would forgo the possibility of deploying those ships to other locations in the world where they could perform other missions.

QUESTIONS FOR BOTH WITNESSES

1. How much is the delayed procurement process of the new Air Force Tanker costing the taxpayer? How much is the extended procurement process costing? How much more will U.S. taxpayers pay to maintain the existing tanker fleet?

RESPONSE

The delays in the tanker replacement program have resulted in lower near-term costs for the Air Force. The Air Force has already retired nearly all of its KC-135E aircraft, the most expensive-to-operate version of the KC-135 remaining in the force. Based on data from 2008, CBO estimates the full-year cost in 2009 to operate the KC-135Rs that remain in the tanker fleet at over \$3 billion. At a production rate of 15 KC-X aircraft per year—as was indicated in the FY2009 budget request, prior to GAO upholding Boeing's protest of the contract award to the Northrop Grumman team—procurement of new tankers alone would cost about \$3 billion per year. That cost would be added to the operations costs for those new aircraft as well as for the KC-135Rs that are yet to be replaced. Even without delays in the replacement tanker program, the KC-135Rs would continue to be the most numerous tanker for many years to come, and the Air Force would continue to incur the cost to operate those that remain.

The extent to which delays in the tanker replacement program will result in different total costs over the entire program is uncertain. It will depend on several factors including how costly the new tanker turns out to be, how many tankers will be needed to support an aviation force whose size and composition may change in the future, how busy the tanker fleet will be supporting operations, how the cost to operate the KC-135Rs will change over time as those aircraft continue to age, and how the cost to operate the new tankers will compare to the cost to operate the KC-135Rs.

QUESTIONS

2. You cited the underestimates, miscalculations and delays as reasons for the increased cost in the procurement process? What changes are being made in the procurement of new military equipment to ensure such a delay does not happen again? What had DoD learned from the USAF Tanker procurement debacle?

3. What cost-saving measures, if any, are currently being utilized by DoD to counter these ballooning costs?

COMBINED RESPONSE TO QUESTIONS 2 AND 3

Public Law 111-23, the Weapon Systems Acquisition Reform Act of 2009, enacted some changes that may help contain cost growth and ensure that initial cost estimates are reasonable and planned schedules are feasible. One important change was the redesignation of the Director, Program Analysis and Evaluation (PA&E) as the Director of Cost Assessment and Program Evaluation (CAPE). The law contains provisions to strengthen and clarify the roles and missions of that office. In addition, by imposing a requirement for CAPE to report annually to the Congressional defense committees, the law provides a mechanism for closer Congressional oversight of acquisition programs. However, it is too soon to tell how effective the law will turn out to be. The new tanker competition may provide one of the first tests of these changes. Although current plans call for the Air Force to manage the program, active oversight by offices such as CAPE should be expected.

QUESTION

4. Currently, one bidder for the tanker has the pricing data from the other bidder (from the first round of bidding), but the other bidder does not have the pricing data from the first company. Do you know of any other major procurements in the past twenty years in which this was the case?

RESPONSE

CBO is not aware of any other major procurement in the past twenty years in which one bidder had the pricing data for the other bidder, as is currently the case in the tanker program.

QUESTION

5. While the base budget does not directly fund the wars in Iraq and Afghanistan, how will the President's request of a 2.5 percent increase in defense spending indirectly affect our troops in those two countries as compared to the 12 percent increase suggested increase from the Joint Chiefs?

RESPONSE

There would likely be little difference to our troops deployed to Iraq and Afghanistan whether the increase in regular defense spending were 2.5 percent or 12 percent. The costs of overseas contingency operations are funded separately from the regular defense budget. One possible indirect effect of higher regular defense spending would be if the military services (principally the Army) increased end strength so that soldiers would have more "dwell time" in the U.S. to recover between deployments. However, Secretary of Defense Gates has already announced a temporary increase in active Army end strength from 547,000 to 569,000 through fiscal year 2012, to be funded (at least through 2010) in the regular defense budget without requesting any additional budget authority. Additional funding is apparently not necessary to increase dwell time.

RESPONSES TO CONGRESSMAN ADERHOLT'S QUESTIONS
FOR THE RECORD FROM MR. DAGGETT

QUESTION

You cite the "inaccurate and apparently worsening estimates of weapons costs" and "schedule delays" as a reason for the increased cost of defense. Can you please give a few examples of such poor estimates and delays? What is the Pentagon doing to correct these problems?

RESPONSE

For the past several years, the Government Accountability Office has prepared annual assessments of the status of Defense Department Major Defense Acquisition Programs (MDAPs), based on DOD Selected Acquisition Reports.¹ The following table summarizes GAO's findings in its two most recent reports:

GAO ANALYSIS OF DOD MAJOR DEFENSE ACQUISITION PROGRAM PORTFOLIOS

[Fiscal Year 2009 Dollars]

Portfolio status	Fiscal year 2000 portfolio*	Fiscal year 2003 portfolio	Fiscal year 2007 portfolio	Fiscal year 2008 portfolio
Number of programs	75	77	95	96
Total planned commitments	\$807 billion*	\$1.2 trillion	\$1.6 trillion	\$1.6 trillion
Commitments outstanding	\$388 billion*	\$724 billion	\$875 billion	\$786 billion
Change to total research and development costs from first estimate	27 percent	37 percent	40 percent	42 percent
Change in total acquisition cost from first estimate	6 percent	19 percent	26 percent	25 percent
Estimated total acquisition cost growth	\$43 billion*	\$183 billion	\$301 billion	\$296 billion
Share of programs with 25 percent or more increase in program acquisition unit cost	37 percent	41 percent	44 percent	42 percent
Average delay in delivering initial capabilities	16 months	18 months	21 months	22 months

Source: Data for FY2003, FY2007 and FY2008 portfolios from Government Accountability Office, Defense Acquisitions: Assessment of Selected Weapon Programs, GAO Report GAO-09-326SP, March 30, 2009. Data for FY2000 portfolio from Government Accountability Office, Defense Acquisitions: Assessment of Selected Weapon Programs, GAO Report GAO-08-467SP, March 31, 2008.

*Note: GAO provided figures for the FY2003, FY2007, and FY2008 portfolios in FY2009 prices. CRS updated GAO's figures for the FY2000 portfolio from FY2008 constant dollars to FY2009 constant dollars using Department of Defense inflation indices.

Some key conclusions are that:

- The cost of defense programs in DOD's FY2008 long-term acquisition plan grew on average by 25 percent over initial estimates, whereas the cost of programs in the FY2000 plan had grown by an average of 6 percent;
- 42 percent of programs in the FY2008 plan grew by more than 25 percent over initial estimates, and 37 percent of programs in the FY2000 plan had grown by more than 25 percent;
- The average delay, compared to the originally planned schedule, in achieving initial capabilities was 22 months for programs in the FY2008 acquisition plan and 16 months for programs in the FY2000 plan;
- The cumulative increase in the total cost of programs in the FY2008 plan amounted to \$296 billion, in constant FY2009 prices, while the cumulative increase in the FY2000 plan amounted to \$43 billion.

This is the basis for concluding that inaccurate and apparently worsening weapons cost estimates are a significant independent factor driving up the cost of defense.

Examples of substantial cost growth and schedule delays include several of the most expensive and high profile programs in each of the military services. As discussed in GAO's March 2009 report, these include:

- **F-35 Joint Strike Fighter:** The F-35 is currently projected to be the largest U.S. defense acquisition program ever. The total acquisition cost of the program has grown from an initial estimate, in October 2001, of \$206.4 billion in constant FY2009 prices, to an estimate in September 2008 of \$244.8 billion, an increase of 18.6 percent. In the mean time, the quantity to be procured declined from 2,866 aircraft to 2,456. As a result, the program unit acquisition cost climbed from an initial estimate of \$72.0 million per aircraft to \$99.7 million, again in FY2009 prices, an increase of 38.4 percent. As to schedule delays, as of December 2007, the projected Initial Operational Capability of the Marine Corps version of the program had slipped from April 2010 to March 2012, of the Air Force version from June 2011 to March 2013, and of the Navy version from April 2012 to March 2015. Cost growth and schedule delays appear to be continuing. In April 2009, Secretary Gates announced a decision to accelerate production of F-35s. Just a few months later, however, that plan appears to have slipped.² In the mean time, independent estimates have projected additional increases in development costs of \$15 billion or more, and the Defense Department is reviewing the status of the program.³ DOD remains committed to the aircraft, and with F-22 procurement limited, the F-35 is the only fifth generation fighter that the United States plans to procure in large numbers. The growth in program costs, however, illustrates the trends that have made even a very substantial defense budget seem tight.

- **Littoral Combat Ship:** The LCS is a relatively small surface combatant, with comparatively high speed and maneuverability, designed to operate close to shore, and intended to be outfitted with specialized modules for a range of missions. Shortly after the inception of the program the Navy revised its requirements, and the projected cost has climbed substantially. The initial cost estimate, in May 2004, was \$328 million per ship in FY2009 prices (though the estimate covered only the first 4 vessels). The latest official updated cost estimate, as of July 2008, is \$560 million per ship (based on 7 vessels), an increase of 70 percent. Specialists at the Center for Naval Analyses, the Congressional Budget Office, CRS, and elsewhere have commented that the initial cost estimates were far too optimistic—based on comparisons with costs of similar-sized foreign ships—even before the Navy added to requirements.⁴

- **Army Future Combat System:** The ground combat vehicle portion of the Army's FCS program was terminated in April 2009, though the Army was directed to pursue an alternative armored ground vehicle program that has yet to be fully defined. The overall Army FCS program encompassed 14 major systems and a number of support programs integrated into an overall system-of-systems design. The program intended to equip fifteen Army brigades with the full package of FCS components. The initial estimate, as of May 2003, was for a total program acquisition cost of \$89.8 billion. As of December 2007, the estimated cost had grown to \$129.7 billion, an increase of 45%. The planned deployment of the system had been stretched from an initial estimate of 8 years to more than 12 years.

Why the Defense Department underestimates program costs, and what to do about it, has been a matter of more or less constant discussion for the past fifty years or more. The problem can be attributed to many factors. The most significant, by most accounts, is simply that there are strong incentives for program advocates in each of the military services—and in defense industry—to gain support for new programs by overstating performance and by understating cost, schedule, and technological risks.⁵

Over the years, DOD leaders have implemented changes in acquisition procedures and created new organizational structures in an effort to control the problem by strengthening centralized oversight. Congress has occasionally enacted measures to reinforce such efforts.

- In 1962, Secretary of Defense McNamara established the Systems Analysis Office, which has since evolved into the Office of Program Analysis and Evaluation, with a mandate, in part, to oversee estimates of acquisition costs.

- In 1972, Secretary of Defense Laird established a separate organization, the Cost Analysis Improvement Group (CAIG), specifically assigned to oversee cost estimation procedures and to review service cost estimates.

- In 1983, Congress enacted measures to require independent cost estimates at key acquisition milestones.

- And in 1992, the Defense Department expanded the CAIG, gave it the task of preparing independent cost estimates, and clarified its other responsibilities.⁶

Without these procedures, DOD's performance in accurately estimating costs might have been worse than it has been. Still, the process reforms and organizational changes that DOD has implemented do not appear to have corrected the problem and, in recent years, as GAO's reports have shown, cost estimates and schedule projections appear to have gotten worse, not better.

Most recently, the Defense Department and the Congress have undertaken yet additional measures that are intended to improve the cost and schedule estimation process. In a few cases, the Defense Department has established independent teams—called “Joint Estimating Teams”—to review cost and schedule projections for specific programs, to provide independent cost estimates, and to propose measures to limit cost growth. JETs have been established, for example, to review F-22 and F-35 development, and, in both cases, the teams identified likely sources of additional cost growth. In addition, toward the end of the last Administration, DOD made a number of changes in defense acquisition regulations intended to correct some of the problems that appear to have contributed to cost growth.⁷ Among other things, the new regulations require reviews of engineering development plans early in the acquisition process and establish Configuration Steering Boards to review proposed technical changes in ongoing development projects with a view toward restricting unnecessary or overly expensive additions to requirements. In its March 2009 report on major acquisition programs, GAO endorsed these changes, saying,

In December 2008, DOD revised its policy for major defense acquisition programs to place more emphasis on acquiring knowledge about requirements, technology, and design before programs start and maintaining discipline once they begin. The policy recommends holding early systems engineering reviews; includes a requirement for early prototyping; and establishes review boards to monitor requirements changes—all positive steps.

None of these changes appear directly to address the key underlying problem, which is the strong incentives for the military services to promote unrealistic cost estimates in order to gain support for new programs. Congress, however, focused on that issue in the Weapon System Acquisition Reform Act of 2009, P.L. 111-23, that was enacted in May 2009. Section 101 of the statute establishes a Director of Cost Assessment and Program Evaluation, to be appointed by the President and approved by the Senate, reporting directly and “without obtaining the approval or concurrence of any other official within the Department of Defense” to the Secretary of Defense. The Director's responsibilities include overseeing “cost evaluation and cost analysis for acquisition programs.” The intent, as the conference report explained, is “to ensure that cost estimates for major defense acquisition programs * * * are fair, reliable, and unbiased.”

The establishment of a new directorate and the December 2008 changes in acquisition procedures have yet to be fully tested, but clearly reflect an effort, both in DOD and in Congress, to improve cost and schedule performance in developing major weapons programs.

QUESTION

You said the Joint Chiefs envision 4 percent of GDP for the DoD base budget. How does this compare with other countries? Given the fact that many countries, including China, spend a larger percentage of their GDP on Defense, is it reasonable for the U.S. to spend only 4 percent of GDP on the DoD base budget?

RESPONSE

Though he has not made similar statements recently, Admiral Mullen, the Chairman of the Joint Chiefs, has, as recently as January of 2009, argued that the defense budget should be maintained at about 4 percent of GDP, saying that such a

level is economically sustainable, since the defense budget has been much larger, as a share of GDP, in the past. None of Admiral Mullen's statements on the matter have been entirely clear about the extent to which the 4 percent level might include some amount for ongoing costs of military operations in Afghanistan, Iraq, and elsewhere in the future, or whether the 4 percent level should apply only to the base defense budget. If applied only to the base defense budget, a 4 percent of GDP level of spending would imply quite substantial increases compared either to the outgoing Administration's long-term defense plan or to tentative plans in the current Administration.

In any case, Admiral Mullen's purpose in repeating such remarks did not appear to be to appeal for a specific level of funding, so much as to argue that the nation can afford enough of an investment in defense to meet current military requirements without imposing a significant strain on the economy. On that point, Admiral Mullen's comments appear unobjectionable. Defense spending as a share of GDP has, as the Chairman pointed out, declined steadily over time as a share of the economy, though not because defense spending has fallen, but because the economy has grown. As a result, there is no good reason to think that somewhat higher defense spending would, in itself, be economically damaging.

The economic effects of higher defense spending, however, depend on other factors—in particular, on how an increase would be financed. Many economists warn that currently projected long-term federal budget deficits cannot be sustained indefinitely without, at some point, driving up the cost of borrowing, particularly from overseas sources. If higher defense spending is financed, therefore, without either greater revenues or offsetting cuts in other federal expenditures, then defense increases could contribute, if only marginally, to economically unhealthy and unsustainable trends.

As to how U.S. defense spending, in absolute terms and as a share of GDP, compares to spending by foreign nations, the following table, drawn from data compiled by the Stockholm International Peace Research Institute, shows military expenditures in U.S. dollars in calendar year 2008 and as a percentage of GDP in calendar year 2007.⁸ The totals are shown ranked by spending and by percentage of GDP.

SIPRI ESTIMATES OF THE TOP 25 NATIONS IN MILITARY EXPENDITURES RANKED BY SPENDING IN U.S. DOLLARS AND BY DEFENSE % GDP, 2007 AND 2008
[Ranked by Expenditures; Ranked by Military Spending as % GDP]

Nation	\$ in millions, 2008	% GDP, 2007
United States	607,263	4.0
China	84,900	2.0
France	65,675	2.3
United Kingdom	65,265	2.4
Russia	58,600	3.5
Germany	46,759	1.3
Japan	46,296	0.9
Italy	40,587	1.8
Saudi Arabia	38,223	9.3
India	30,030	2.5
Korea, South	24,172	2.6
Brazil	23,302	1.5
Canada	19,290	1.2
Spain	19,196	1.2
Australia	18,399	1.9
Israel	16,194	8.6
Turkey	15,810	2.1
Greece	12,627	3.3
Netherlands	12,228	1.5
Poland	10,741	2.0
Taiwan	10,331	2.0
Iran	9,174	2.9
Colombia	9,076	4.0
Syria	7,735	4.4
Singapore	7,507	4.1

Source: Stockholm International Peace Research Institute, SIPRI Yearbook 2009, (Stockholm: SIPRI, 2009).

Notes: Data are not available for some nations that might rank in the top 25, including North Korea and Iraq. Figures for China, Russia, Italy, Turkey, Greece, and Israel are SIPRI estimates rather than official reported amounts.

While some other countries, mainly in the Middle East, devote a greater share of GDP to defense, the U.S. level, which was at about 4% of GDP in 2007, is larger than most, and higher than that of China or Russia. Moreover, in absolute terms, U.S. military spending is far higher than that of any other nation. According to SIPRI estimates, in 2008, U.S. military expenditures were about 45% of the world total.⁹

Neither Admiral Mullen, nor others who have advocated 4% or more of U.S. GDP for defense, appear to be arguing that such an amount is a measure of what U.S. military strategy requires. Rather, they appear to be arguing that such an amount is affordable in economic terms. The key questions for U.S. policymakers have to do with the strategy necessary to ensure U.S. security; the size, composition, and technological capabilities of military forces that are needed to carry out the strategy; and the amount of spending that is reasonably necessary to support those forces. Whether one considers the defense budget to be adequate or not, therefore, does not depend on the defense share of GDP, but rather, first of all on strategic requirements, second on programs needed to support the strategy, and then, and only then, on budget totals.

The premise that budgets should be derived from an analysis based first of all on defense strategy is reflected in standing law. The congressional mandate for the Quadrennial Defense Review, which was made into a permanent requirement as Section 118 of Title 10 U.S. Code by the FY2000 National Defense Authorization Act,¹⁰ lays out the principle that a review of strategy should lead to an assessment of force requirements and then of budgets as follows:

Sec. 118. Quadrennial defense review

[* * *]

(b) CONDUCT OF REVIEW—Each quadrennial defense review shall be conducted so as—

(1) to delineate a national defense strategy consistent with the most recent National Security Strategy prescribed by the President pursuant to section 108 of the National Security Act of 1947 (50 U.S.C. 404a);

(2) to define sufficient force structure, force modernization plans, infrastructure, budget plan, and other elements of the defense program of the United States associated with that national defense strategy that would be required to execute successfully the full range of missions called for in that national defense strategy; and

(3) to identify (A) the budget plan that would be required to provide sufficient resources to execute successfully the full range of missions called for in that national defense strategy at a low-to-moderate level of risk, and (B) any additional resources (beyond those programmed in the current future-years defense program) required to achieve such a level of risk.

QUESTION

Should the U.S. set a limit on Defense spending before assessing our needs?

RESPONSE

I am not aware of any defense analysis or of any defense advocacy group that has argued that defense spending should be limited before assessing requirements, nor, for that matter, of any who have argued that 4% of GDP or more should be spent on defense without regard to requirements. There has been considerable debate, however, about the degree to which resource constraints should be reflected in defense planning, particularly in the Quadrennial Defense Review. Many have complained that earlier QDRs were “budget drills” rather than “strategy-driven” assessments. In the FY2007 John Warner National Defense Authorization Act (NDAA), Congress specifically required that the assessment of defense strategy, force structure, and budgets in future Quadrennial Defense Reviews not be “constrained to comply with the budget submitted to Congress by the President pursuant to section 1105 of title 31.”¹¹

DOD has not, however, taken this provision to require that QDRs be conducted without regard to limits on resources. As Secretary Gates expressed it, the QDR needs to be “resource informed” if not “resource constrained.” One purpose of QDRs is to guide priorities in allocating resources that are always, to some degree, limited. Indeed, a key element of any strategic thinking is how to manage necessarily limited resources to accomplish critical objectives, and strategic objectives themselves must necessarily be defined in terms of what is possible. The issue for the upcoming QDR is how to balance the need for some degree of realism in budget planning with Congress’s clear intent that reviews should be conducted independently enough to

identify significant shortfalls in resources. How well it does so may be a matter of some debate.

QUESTION

How much is the delayed procurement process of the new Air Force Tanker costing the taxpayer? How much is the extended procurement process costing? How much more will U.S. taxpayers pay to maintain the existing tanker fleet?

RESPONSE

The recompetition of the tanker contract has required each of the competitors to prepare new bids. The government is covering at least part of the cost for Boeing, since its appeal of the earlier contract award to Northrop Grumman-EADS was upheld. CRS does not have official information on the total cost, but, based on discussions with defense company executives, the total could be as much as \$50 to \$100 million. This is a substantial penalty to pay for an apparently flawed competitive bidding process, though officials comment that it is not a major expense compared to the ultimate \$35-\$40 billion cost of the overall acquisition program. The delay of the contract award will entail one or two years of additional operation of some KC-135 aircraft. Initial deliveries of new tankers will begin in about 2015, and KC-135s will then be retired as new aircraft are delivered. The delay will not significantly affect plans for depot maintenance overhauls of KC-135s, however, since bulk of the fleet will continue to operate for many more years as the new tankers are delivered. There may be a marginal difference in costs of operation between the older KC-135s and newer tankers, but, again, additional costs due to the delay do not appear to be of very great magnitude compared to the cost of the new acquisition. The extent of added costs depends on the pace at which new aircraft are purchased, which, in turn, depends on long-term budget trade-offs.

QUESTION

You cited the underestimates, miscalculations and delays as reasons for the increased cost in the procurement process? What changes are being made in the procurement of new military equipment to ensure such a delay does not happen again? What had DoD learned from the USAF Tanker procurement debacle?

RESPONSE

DOD officials have said that the main lesson of GAO's rejection of the initial contract award was that the selection criteria were too broad, leaving too much uncertainty on the part of the competing companies about the final basis of the award decision. According to senior DOD officials, the initial Request for Proposals (RFP) listed 808 requirements, of which 37 were mandatory.¹² The bidding companies had extensive latitude to propose trade-offs between the non-mandatory requirements, but were left with a great deal of uncertainty about which requirements the selection process would weigh most highly. That uncertainty was a large part of the basis for the Comptroller General's decision to reject the award. The new RFP, which was released for comments in September 2009, reduced the 808 requirements to 373 mandatory requirements, with 93 additional non-mandatory requirements that bidders may propose to meet to varying degrees. Officials say that this clarifies the selection criteria sufficiently to be fair to the competing companies. As to the cost of recompetitions in general, it is not usual for programs to be delayed by the success of contract appeals. Most cost growth results from underestimates of costs at the inception of programs and from reliance on immature technologies that then grow in cost or cause delays.

QUESTION

What cost saving measures, if any, are currently being utilized by DoD to counter these ballooning costs?

RESPONSE

In general, DOD is in the process of implementing changes in the acquisition process that fall into five broad areas, all of which are affected to some degree by the Weapons Acquisition Reform Act of 2009, and all of which are important in improving the process. These include:

1. Efforts to improve initial weapons cost estimates. Concern about systematic underestimation of costs at the inception of new programs is a large part of the reason Congress established an independent Director to oversee cost analyses and pro-

gram evaluation. The success of the new directorate will depend on the willingness of senior defense officials to reject service cost estimates that appear overly optimistic, that are at odds with independent estimates, or that are based on new and untested premises.¹³

2. Measures to ensure technological maturity. New DOD regulations and many provisions of the Acquisition Reform Act are aimed at ensuring that new technology is mature enough at specific milestones in the acquisition process to warrant going ahead to new and costly stages in development. GAO refers to the principle as “knowledge based acquisition.” GAO and other reviews of “technology readiness levels” in system development have found that DOD often proceeds with development without meeting its own criteria for the maturity of new technology. Efforts to reverse this pattern include requiring additional prototyping, more rigorous adherence to milestone requirements, and the requirement for independent reviews of new systems designs in an effort to rein in excessively optimistic efforts to make major technological leaps ahead without an adequate basis for assessing risks. Success, again, depends on how willing senior officials are to reject projects that do not meet established requirements.

3. Ensuring that system requirements reflect strategic priorities. Secretary Gates has complained that the acquisition process appears still to be following a Cold War model that seeks maximum advances in technology in almost every area of system development. In some cases, the Secretary argues, a 75 percent solution may be appropriate, rather than a 99 percent solution that costs much more and that accepts much higher technical risk. Measures to review system design at the initial stages of development may help overcome the incentives to be unnecessarily aggressive in pursuing pursue unnecessarily aggressive in pursuing technological advances. Success, again, depends on senior officials ensuring that overall strategic priorities are reflected in decisions on specific systems. The issue is whether the acquisition system can strike an appropriate balance between the value of marginal improvements in capabilities and increased cost. Improvements in force protection, for example, might obviously warrant support even at very high cost. Improvements in cargo lift capabilities or in communications bandwidth compared to commercial technologies, in contrast, might not warrant such a high priority.

4. Use of appropriate contracting procedures and competitive contract awards. The Defense Department has been working to develop criteria for managing competition and for using contracting procedures that will improve performance and also limit costs. Issues include whether second sources, though costly to maintain, may drive down costs by ensuring continued competition, when fixed price contracts are in order, how to use incentives to encourage improved performance, and what limits should be established on contract extensions.

5. Improvements in the defense acquisition workforce. The Acquisition Reform Act, other legislative measures, and a number of DOD initiatives are aimed, first, at taking back into the government some acquisition management responsibilities that had been outsourced; second, at expanding the size and quality of the acquisition work force; and, third, at ensuring high quality continuing education and training of the work force.

How successful these measures will be in improving the process remains to be seen.

QUESTION

Currently, one bidder for the tanker has the pricing data from the other bidder (from the first round of bidding), but the other bidder does not have the pricing data from the first company. Do you know of any other major procurements in the past twenty years in which this was the case?

RESPONSE

Because it was appealing the initial tanker award decision, Boeing was given access to Northrop Grumman-EADS pricing information. Company officials have complained that this gives Boeing an unfair advantage in the new competition. Others counter that Boeing and EADS have long experience competing in the commercial sector with aircraft that are identical in basic design to the aircraft they are proposing for the competition, so basic pricing is not a great secret. For their part, DOD officials have said that the current competition has both different selection criteria and a different contract structure, so that the previous bids are not necessarily a clear guide to the new bids.¹⁴

There may be some examples of cases in which a successful appeal of a contract award has led to one company having garnered data on another company's initial offer. CRS has not had occasion to look at the history of DoD contract appeals and

subsequent recompetition of contract awards to be sure that this is the case, however, or to know of any specific examples.

QUESTION

While the base budget does not directly fund the wars in Iraq and Afghanistan, how will the President's request of a 2.5 percent increase in defense spending indirectly affect our troops in those two countries as compared to the 12 percent increase suggested increase from the Joint Chiefs?

RESPONSE

There have been recent press accounts to the effect that the President's FY2011 budget will request an increase of 2 percent or more above inflation in funding for the Department of Defense, but Administration officials have not confirmed these accounts.¹⁵ The most recent reports are that the Administration plans to request \$549 billion in discretionary funding for the base defense budget in FY2011, with an additional \$159 billion for war costs.¹⁶ Assuming a final appropriation for the base DOD budget of \$530 billion in FY2010, an increase to \$549 billion would amount to growth of 3.5% without adjusting for inflation. If inflation is assumed to be 2.4%, real, inflation-adjusted growth would amount to about 1.1%.

I am not aware of any account to the effect that the Joint Chiefs have proposed a larger increase in the FY2011-FY2015 defense plan. Prior to release of the FY2010 budget request last year, there were some accounts to the effect that the Chiefs had endorsed an increase of as much as \$57 billion in the FY2010 base DOD budget compared to earlier plans, and that the Administration rejected that proposal. Based on briefing materials that were published by the trade press, however, it appears that these accounts were quite misleading. DOD apparently did consider a \$57 billion addition to the FY2010 budget in August of 2008. Of the \$57 billion addition, more than \$30 billion appears to have been due to a shift of some ongoing war costs into the base budget, and another \$12 billion was to cover inflation and fuel cost increases that later did not materialize.¹⁷

Whether there might be significant gaps between service budget plans and overall top line budget totals in the upcoming FY2011 request may become more clear after release of the request, which is expected to be accompanied by a full five-year budget plan extending through FY2015. CRS testimony before the Budget Committee in February 2009 noted that each of the services had complained of shortfalls in funding for their projected long-term acquisition and operating plans. In its very detailed annual assessments of the long-term defense program, CBO has regularly pointed to significant gaps between projected plans and resources.

ENDNOTES

¹A "Major Defense Acquisition Program" is defined by Section 2430 of Title 10 U.S. Code as "a Department of Defense acquisition program that is not a highly sensitive classified program (as determined by the Secretary of Defense) and (1) that is designated by the Secretary of Defense as a major defense acquisition program; or (2) that is estimated by the Secretary of Defense to require an eventual total expenditure for research, development, test, and evaluation of more than \$300,000,000 (based on fiscal year 1990 constant dollars) or an eventual total expenditure for procurement of more than \$1,800,000,000 (based on fiscal year 1990 constant dollars)." Section 2432 of Title 10 requires the Defense Department to submit to Congress quarterly "Selected Acquisition Reports" with detailed information on the schedule and cost of all Major Defense Acquisition Programs.

²Tony Capaccio, "Gates Calls for Delay in Pentagon Purchases of Lockheed F-35s," *Bloomberg.com*, January 7, 2010; Jason Sherman, "DOD Braces For Yet Another F-35 Cost And Schedule Assessment," *InsideDefense.com*, January 6, 2010.

³Gopal Ratnam and Tony Capaccio, "Pentagon Concerned With Lockheed F-35's Cost Trends," *Bloomberg.com*, December 2, 2009.

⁴Based in part on author's notes of comments at a meeting at CRS including CNA, CBO, and CRS analysts and congressional aides on December 14, 2009.

⁵See, for one example, John J. Young, Jr., Under Secretary of Defense for Acquisition, Technology, and Logistics, Memo for the Secretary of Defense, "Reasons for Cost Changes in Selected Major Defense Acquisition Programs," January 30, 2009, published on line by *InsideDefense.com*.

⁶Russell Vogel, Executive Secretary, Cost Analysis Improvement Group, "An Overview of the Cost Analysis Improvement Group," Briefing Slides, June 14, 2002. Accessed on line on January 8, 2010 at <http://www.scaf.org.uk/library/prespaper/CAIG%20Overview.pdf>.

⁷See DOD Instruction (DODI) 5000.02, "Operation of the Defense Acquisition System," December 8, 2008.

⁸An alternative source is the International Institute for Strategic Studies. IISS, however, shows only officially reported amounts of military expenditures for China and some other nations, which significantly understate expenditures. In 2007, IISS shows China's military expenditures at \$46 billion.

⁹The SIPRI yearbook shows total worldwide military expenditures in 2008 of \$1,226 billion in 2005 U.S. prices, of which the U.S. total was \$548 billion, or 45%. IISS shows worldwide military expenditures in 2007 of \$1,279 billion in 2007 U.S. prices, of which the U.S. total was \$553 billion, or 43%.

¹⁰P.L. 106-65, Section 901.

¹¹P.L. 109-364, Section 1031.

¹²See DoD News Briefing with Deputy Secretary of Defense William Lynn, Under Secretary of Defense Ashton Carter, and Secretary of the Air Force Michael Donley, September 24, 2009, available on line at <http://www.defense.gov/transcripts/transcript.aspx?transcriptid=4484>.

¹³Case studies of cost underestimation would be useful in assessing the causes of recently worsening problems. Some have said that F-22 cost underestimates were based on overoptimistic assessments of progress in “lean” manufacturing techniques and also that early prototypes were not representative of production designs. DDG-1000 costs may have been underestimated because the Navy rejected traditional methods of estimating costs based on ship tonnage as out of date, but then did not project costs of electronics and other elements of the ship design on the basis of reliable models. These and other concerns about costing procedures, however, have not been studied as thoroughly as is needed to support firm conclusions.

¹⁴DoD News Briefing with Deputy Secretary of Defense William Lynn, Under Secretary of Defense Ashton Carter, and Secretary of the Air Force Michael Donley, September 24, 2009.

¹⁵Jason Sherman, “OMB Grants Defense Department Nearly \$60 Billion More Over Five Years,” Inside the Navy, December 7, 2009.

¹⁶Anne Gearan and Anne Flaherty, “AP Exclusive: Obama Wants \$33 Billion More for War”, The Associated Press, Wednesday, January 13, 2010.

¹⁷Army Briefing Slide, “Current Overview of \$57 B,” November 2008, published by InsideDefense.com.

[Whereupon, at 11:55 a.m., the Committee was adjourned.]

